

# ∞ Türk Psikiyatri Dergisi ∞

*Turkish Journal of Psychiatry*

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**TPD 25. YILLIK TOPLANTISI ve KLİNİK EĞİTİM  
SEMPOZYUMU BİLDİRİ ÖZETLERİ**

TÜRKİYE  
SİNİR VE  
RUH SAĞLIĞI  
DERNEĞİ

# Türk Psikiyatri Dergisi

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**TÜRKİYE PSİKİYATRİ DERNEĞİ**  
**YILLIK TOPLANTISI VE**  
**1. ULUSLARARASI**  
**25. ULUSAL KLİNİK EĞİTİM**

**SEMPOZYUMU**

**19-22 MAYIS 2022**  
**ALTIN YUNUS OTEL, ÇEŞME**

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## TÜRKİYE PSİKİYATRİ DERNEĞİ 25. YILLIK TOPLANTISI ve KLİNİK EĞİTİM SEMPOZYUMU

### Değerli meslektaşlarımız,

Bu yıldan itibaren uluslararası nitelikte düzenlenecek Türkiye Psikiyatri Derneği Yıllık Toplantısı ve 1. Uluslararası 25. Ulusal Klinik Eğitim Sempozyumu'nda sizlerle buluşmak için sabırsızlanıyoruz. Pandemi nedeniyle kongrelerin tamamen çevrim içi olduğu dönemde düzenlediğimiz 24. Klinik Eğitim Sempozyumu davet mektubunda “Belki aynı masada oturamayacağız, belki denizin sesini birlikte dinleyemeyeceğiz, belki hasretle kucaklaşamayacağız ama birbirimizi duyacağız, göreceğiz ve birbirimizden öğreneceğiz” demiş, “Bilgisayarlarınız güncel mi? Yeterli kotanız var mı? Kahve hazır mı? Koltuklar rahat mı?” diye sormuştuk. 20-24 Ekim 2021’de sizlerin değerli katkı ve katılımınızla gerçekleştirdiğimiz 57. Ulusal Psikiyatri Kongresi’nde ise fiziksel olarak aynı mekânı paylaşmanın yanı sıra çevrim içi toplantıların avantajlarından da yararlandık, böylece Ulusal Psikiyatri Kongresi ilk kez hibrit olarak düzenlendi. Alınan önlemler sayesinde yüz yüze katılan meslektaşlarımızın sağlığını riske atmadan kongreyi tamamlayabildik. Çevrim içi katılmayı tercih eden meslektaşlarımıza da bir salondaki tüm oturumları izleme seçeneği sunarak her nerede iseler orada kongre heyecanını ve keyfini kendilerine ulaşturmaya çabaladık. Böylelikle pandemi sürecinde tümüyle çevrim içi düzenlenen kongrelerden hibrit kongreye geçiş yapmış olduk.

Bu birikim sonucunda, asistanlıktan emekliliğe sürekli eğitimin, mesleki gelişimin toplantısı Klinik Eğitim Sempozyumu’nu, 19-22 Mayıs’ta bir kez daha hibrit olarak düzenlemeye karar verdik. Sempozyumu, yüz yüze katılmayı tercih eden meslektaşlarımızla Çeşme Altın Yunus Otel’de aynı masaya oturacağımız, denizin sesini birlikte dinleyebileceğimiz ve kollarımızla değilseniz de gözlerimizle kucaklaşacağımız biçimde, çevrim içi katılmayı tercih edecek meslektaşlarımızla da iki salondaki tüm oturumları bilgisayarlarından izleyebilecekleri şekilde düzenleyeceğiz. Etkinlik önerisi veren meslektaşlarımıza tüm konuşmacıların yüz yüze salonlarda bulunmaları gereğinin altını çizmek isteriz.

Gerek sizlerden aldığımız bildirimler doğrultusunda gerek aşılardan etkinlikleri hakkındaki tartışmaların gündemden düşmediği bu dönemde, Türkiye Psikiyatri Derneği Yıllık Toplantısı ve 1. Uluslararası 25. Ulusal Klinik Eğitim Sempozyumu’nun odağına tedavilerde etkinlik ve etkililiği koymak istedik. Çalışma Birimlerimiz bu doğrultuda önerilerini hazırlayacaklar, Bilimsel Düzenleme Kurulumuz oturumları planlayacak. Yan yana ama maske-mesafe ve HES kodlarımızla ya aşı belgelerimiz ya da PCR test sonuçlarımızla salonlarda veya ekran başında kâh evde, kâh hastanede, belki serviste, belki muayenehanede ancak her halükârda bir arada dinleyeceğiz, konuşacağız, tartışacağız ve hep yaptığımız gibi birbirimizden besleneceğiz. Oturumlar dışında, bilimsel ve mesleki konularda çalışma birimlerimizin toplanacağı, heyecanlı tartışmalar yapacakları ve ortak çalışmalar planlayacakları, meraklılarının uzmanlarla buluşacağı Altın Yunus Otel’in geniş bahçesinin sunduğu imkânla kimi zaman açık havada, çevrim içi katılanların da ekran başından ulaşabilecekleri ortamlar oluşturmayı hayal ediyoruz. Artık gelenekselleştiği üzere bu yıl da Sempozyumu Çocuk Dostu olarak düzenliyoruz.

Kongrede ne olacak? Yoğun bir bilimsel program ve yüksek katılımı geçirdiğimiz 57. Ulusal Psikiyatri Kongresi’nde edindiğimiz deneyimleri Klinik Eğitim Sempozyumu’nda kullanarak katılımcılarımızın mutlu ve tatminkâr ayrılacağı bir toplantı geçirmeleri için çabalyoruz. UPK geri bildirimlerindeki tebrikleri, iltifatları olduğu kadar değerli önerilerinizi, serzenişleri de kaydettik. Hepsini dikkate alarak Merkez Yönetim Kurulu ve Bilimsel Toplantılar Düzenleme Kurulu olarak Sempozyum planını yapmaya gayret ettik. Şimdi sıra hepimizde: Uluslararası katılımı, Etik duyarlılıkla, Dayanışma içinde, Bilimi önceleyen 25. Klinik Eğitim Sempozyumumuzu hep birlikte oluşturalım.

Türkiye Psikiyatri Derneği Yıllık Toplantısı ve 1. Uluslararası 25. Ulusal Klinik Eğitim Sempozyumu’nda görüşmek dileğiyle...

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## QUANTITATIVE DETECTION OF METHYLATED SOCS-1 IN SCHIZOPHRENIA AND BIPOLAR DISORDER CONSIDERING SOCS-1 -1478CA/DEL POLYMORPHISM AND CLINICAL PARAMETERS

**Hasan Mervan Aytac<sup>1</sup>, Sacide Pehlivan<sup>2</sup>, Mustafa Pehlivan<sup>3</sup>, Yasemin Oyaci<sup>2</sup>**

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**INTRODUCTION AND AIM:** Involvement of the immune system was proposed in the pathology of schizophrenia (SCZ) and bipolar disorder (BD). Suppressor of cytokine signaling (SOCS) proteins are the negative critical controllers of inflammatory responses by inhibiting the Jak/Stat transduction pathway. It has also been documented several times in cancer studies that the SOCS-1 promoter is hypermethylated, resulting in downregulation of SOCS-1 expression. However, no prior study has investigated the quantitative detection of methylated SOCS-1 considering SOCS-1 -1478CA/del polymorphism and clinical parameters in SCZ and BD. Furthermore, regarding the function of SOCS proteins in regulating immune responses and the revealed dysregulation of the inflammatory system in SCZ and BD, we hypothesized that the methylation quantity of the SOCS-1 gene might be different in SCZ and BD compared to the healthy participants, and its relationship with clinical parameters may provide clues about the course of the disorders. Therefore, we aimed to examine the methylated SOCS-1 quantity in DNA samples of both SCZ and BD patients.

**METHOD:** SCZ (n=114) and BD (n=86) patients were consecutively admitted to the outpatient clinic of the Malazgirt State Hospital for three months; additionally, 80 age-, gender-, and ethnicity- matched healthy participants were included in our case-control research. The study is approved by the Clinical Research Ethics Committee of the Istanbul Faculty of Medicine (03/22.01.2021). First, the SCID-I was administered to confirm the patients' diagnosis. Then, the PANSS was applied for patients with SCZ, while the HAM-D and the YMRS were used for assessing the severity of symptoms of BD patients. Finally, we analyzed the symptom severity and treatment response with the CGI. Bisulfite-converted DNA samples were analyzed using the real-time quantitative methylation-specific PCR method to measure the methylation level of the SOCS-1 gene. SOCS-1 -1478CA/del gene polymorphism was analyzed with the PCR-RFLP.

**RESULTS:** Our results demonstrated that when the SOCS-1 promoter methylation levels of SCZ and BD patients were compared with the control group, the methylation levels of SCZ ( $p = .001$ ) and BD ( $p = .024$ ) were significantly lower than the control group. While the SOCS-1 CA/CA genotype frequency was significantly higher in the control group than in the BD group ( $p = .013$ ), the del/del genotype was related to a higher frequency of rapid cycling and a lower frequency of family history in BD patients group ( $p = .043$ ;  $p = .042$ , respectively) (Table 1). The methylated SOCS-1 quantity in DNA samples of SCZ patients was significantly higher in the group of an earlier age of illness

onset ( $p = .009$ ). Again, SOCS-1 promoter hypermethylation levels were significantly associated with the higher YMRS score in BD patients ( $p = .027$ ) (Table 2).

**DISCUSSION AND CONCLUSION:** Our research documented that the methylated SOCS-1 quantity in DNA samples of both SCZ and BD patients was significantly lower than in control samples. Therefore, we speculate that our results imply that epigenetic aberrations of the SOCS-1 promoter may be related to the pathogenesis of SCZ and BD's in the Turkish population. However, when the literature about SOCS-1 promoter methylation related to SCZ and BD is reviewed, no research has been found to examine the relationship. We assume that SOCS-1 promoter hypomethylation and increased levels of SOCS-1 proteins in the SCZ and BD patient's peripheral blood might impair the integrity of the blood-brain barrier (BBB) or lead to more elevated levels of these proteins in CNS tissue due to disturbed BBB in these patients. Moreover, such peripheral over-expression of the SOCS-1 gene may be a compensatory mechanism to relieve the damaging effects of cytokine over-production in patients. Therefore, elevated levels of SOCS proteins may suggest evidence for chronic inflammation in SCZ and BD.

The present study shows a statistically significant difference in the genotype distribution between BD patients and healthy controls for SOCS-1 -1478CA/del variant. The CA/CA genotype was significantly higher in the control group than the BD group. Again, the percentage of rapid cycling feature was higher in BD patients with del/del genotype. Therefore, we can speculate that the BD patients carrying the del/del genotype had a significantly higher risk for rapid cycling feature and a lower risk for family history in BD patient group in the Turkish population.

When we compared the SOCS-1 promoter methylation level in patients diagnosed with the SCZ or BD according to clinical characteristics and scale scores demonstrated that more hypermethylated positions in SOCS-1 promoter were found in patients with early-onset SCZ patients. Accordingly, we think that antipsychotic treatment started at an earlier age may cause increased quantitative methylation of SOCS-1 promoter in individuals with early onset of SCZ compared to late-onset patients. In literature, some results of researches are parallel to our findings. For example, Melas et al. found that SCZ patients using haloperidol had a higher global DNA methylation level. Again, the YMRS scores were higher in the group with the SOCS-1 gene hypermethylation rates. Since the SOCS-1 gene has cytokine signal suppressor properties, the hypermethylation state may increase cytokine levels in the periphery. This is important because it may show the linear relationship between high inflammation and symptom severity.

In conclusion, in our study, having the SOCS-1 promoter hypomethylation can be disadvantageous for preventing disorder in both SCZ and BD patients. Besides, while having the SOCS-1 -1478CA/del CA/CA genotype may be advantageous in not being diagnosed with BD in the Turkish population, the del/del genotype is associated with a higher frequency of rapid cycling and a lower frequency of family history in BD patient group. Moreover, these findings showed associations between SOCS-1 promoter hypermethylation and the earlier age of SCZ onset, along with the higher YMRS score in patients diagnosed with BD. The function of DNA methylation in psychiatric disorders is a new and open field with pharmacologic implications. DNA methyltransferase inhibitors and anti-inflammatory treatments

are recently suggested to have therapeutic benefits for psychiatric disorders. Thus, our study revealed that SOCS-1 might be used as a therapeutic target in the future. The demethylated SOCS-1 gene may become a new target for future treatment for SZ and BD and provide new hope for diagnoses and prognoses of chronic psychiatric disorders.

**Keywords:** bipolar disorder, DNA methylation, epigenetics, qMS-PCR, schizophrenia, SOCS-1

**Table 1.** Comparison of percentages of SOCS-1 promoter methylation and SOCS-1 genotype distribution of patients with the control group

	Genotype	Patient n (%)	Healthy Control n (%)	OR Exp(B)	95% CI	p
Schizophrenia	CA/CA	14 (12.3)	21 (26.2)	1.623*	0.669-3.938*	.284*
SOCS-1	CA/del	63 (55.3)	29 (36.3)	0.529*	0.263-1.064*	.074*
	del/del	37 (33.4)	30 (37.5)	0.801&	0.440-1.458&	.540&
PMR	median (min-max)	10.4 (0.01-522.1)	43.4 (2.8-247.8)			.001#
Bipolar Disorder	CA/CA	7 (8.1)	21 (26.2)	3.495*	1.295-9.431*	.013*
SOCS-1	CA/del	45 (52.4)	29 (36.3)	0.780*	0.394-1.546*	.477*
	del/del	34 (39.5)	30 (37.5)	1.090&	0.583-2.038&	.873&
PMR	median (min-max)	22.5 (1.57-968.3)	43.4 (2.8-247.8)			.024#
Bipolar Disorder		SOCS-1 genotypes (-1478CA/del)				p
Clinical Specifiers (statistically significant ones)		CA/CA-CA/del	del/del			
Rapid Cycling		4 (7.7)	8 (23.5)	0.260*	0.071-0.959*	.043*
Family History		30 (57.7)	12 (35.3)	2.500*	1.024-6.106*	.042*

\*OR (95%CI) was adjusted by age and sex; &Fisher's Exact Test; #median test; PMR, the percentage of methylated reference.

**Table 2.** Comparison of the SOCS-1 promoter methylation level in patients diagnosed with the SZ or BD according to the clinical parameters and scale scores

		2- $\Delta\Delta\text{CT} \times 100\%$ PMR >43.4 (n=28)	2- $\Delta\Delta\text{CT} \times 100\%$ PMR <43.4 (n=86)	p
		Median (min-max)	Median (min-max)	
Schizophrenia	Duration of dis.	16.5 (2-38)	15 (1-45)	.746#
	Age of onset	22 (8-40)	25 (5-60)	.009#
	Number of hospi.	1 (0-30)	2 (0-20)	.355#
	PANSS pos.	10 (7-20)	11 (7-25)	.500#
	PANSS neg.	14 (8-22)	16 (7-35)	.277#
	PANSS psycho.	27.5 (19-29)	30 (17-54)	.321#
	PANSS total	53.5 (35-84)	59 (33-102)	.229#
Bipolar Disorder	Duration of dis.	15 (1-40)	15 (1-40)	.755#
	Number of hosp.	2 (0-21)	2 (0-21)	.638#
	Manic episode	2 (0-21)	3 (1-25)	.473#
	Dep. episode	1 (0-6)	1 (0-12)	.594#
	Total episode	4 (1-23)	4 (1-27)	.510#
	HAM-D	9 (4-31)	10 (0-34)	.322#
	YMRS score	9 (0-38)	5 (0-27)	.027#

Dis., disorder; hospi., hospitalizations; PANSS, positive and negative syndrome scale; pos., positive; neg., negative; psycho., psychopathology; Dep., depressive; HAM-D, hamilton depression rating scale; YMRS, young mania rating scale; PMR, the percentage of methylated reference; #Median Test.

## CAN THE IMBALANCE BETWEEN NEUROTROPHIC AND APOPTOTIC PROTEINS BE THE "BEWARE THE IDES OF MARCH" FOR UNAFFECTED RELATIVES OF SCHIZOPHRENIA PATIENTS?

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**INTRODUCTION AND AIM:** To explain the pathogenesis of SZ, several hypotheses have been put forward. One of these hypotheses is the synaptic pruning hypothesis(1). Synaptic pruning is the selective elimination of synapses during synapse formation and refinement. In vivo animal studies have shown that synaptic pruning occurs via apoptosis; however; direct evidence for synaptic pruning in humans is currently lacking(2). Nonetheless, Longitudinal MRI studies in children showed that while the volume of white matter increased in early childhood, the volume of gray matter decreased during adolescence, suggesting the occurrence of synaptic pruning(3). Although this synaptic loss during adolescence is physiological, excessive loss has been implicated in the pathogenesis of SZ (3).

Brain-derived neurotrophic factor (BDNF) is a major neurotrophic factor that is synthesized from its precursor pro-BDNF in a pathway in which tissue Plasminogen Activator (tPA)/plasmin and cortisol are integral. By binding to its receptor tropomyosin receptor kinase B (TrkB), BDNF is known to be essential for survival, differentiation, outgrowth, synaptic plasticity of neurons.

Pro-BDNF, the precursor of BDNF that was previously considered to be an inactive protein, has recently been shown to act as a ligand for the Neurotrophin Receptor p75NTR (p75NTR) and plays important roles in several physiological functions such as neuronal death (4). Thus, it is thought that there is a critical balance between the ligand-receptor complex of pro-BDNF/p75NTR and mature (m)-BDNF/TrkB(3). Therefore, any potential imbalance between these proteins can play a role in the pathogenesis of neuropsychiatric disorders by enhancing synaptic pruning. Endophenotypes have recently gained importance, particularly for diseases such as SZ for which the pathogenesis remains unclear. With the availability of genome sequencing, many studies on SZ have focused on disease risk of unaffected first-degree relatives of SZ patients(5). Therefore, it is increasingly important to determine the disease risk of these groups early with the use of methods like endophenotypes. The current study was designed to examine the hypothesis that an imbalance between neurotrophic and apoptotic proteins such as pro-BDNF /m-BDNF and p75NTR/TrkB can be used as endophenotypes for SZ.

**METHOD:** This study was conducted within the scope of a research project aiming to examine the tPA-BDNF pathway in patients with first-episode psychosis (FEP). A total of 65 patients with FEP were included in the project. However, 25 FEP patients were excluded from the current study because they did not have a sibling/unaffected sibling. Therefore, forty drug-naïve FEP patients diagnosed according to SCID-5 were included in the study. Consent to participate in the study was obtained from both FEP patients and their siblings within the same age

range. These patients were observed by an experienced psychiatrist over a period of 4–6 weeks. Forty unaffected siblings (UAS) of FEP patients who did not have any history of psychiatric diseases were selected from among the brothers and sisters that were matched for age, gender, and level of education. In addition, 67 healthy controls (HC) who were matched with the patients for age, gender, and marital status, with no previous psychiatric complaints and no psychiatric disorders in the psychiatric interview as well as a negative family history for SZ and other psychotic disorders were included in the study. FEP patients, UAS and HC who met the inclusion criteria of the study were directed to the research team by their physicians. After the FEP patients, UAS and HC were informed about the study, written informed consent was obtained from those who agreed to participate. Later, sociodemographic and clinical data forms were filled by all participants. Mature BDNF, pro-BDNF, TrkB, p75NTR, Plasminogen Activator Inhibitor-1 (PAI-1), tPA, Adrenocorticotrophic Hormone (ACTH) and cortisol levels were determined in both patient and control groups. Ethical approval for the study was obtained from an Ethical Committee of University of Health Sciences (IRB Date/Number; 01.10.2021/30-24). Financial support for the current research was provided by the University of Health Sciences Research Projects Unit (Date/ Number; 07.03.2019/020).

**RESULTS:** Plasma levels of m-BDNF were found to be the lowest in the healthy siblings and highest in the healthy control group with statistically significant differences between all 3 groups. The plasma levels of pro-BDNF in the healthy control group was similar to the FEP patients, the same in the healthy siblings of the FEP patients was lower than the FEP patients. Using ROC analysis, we analyzed the differential power of single m-BDNF, pro-BDNF, p75NTR, TrkB, PAI-1, pro-BDNF/m-BDNF and p75NTR/TrkB levels in the tPA-BDNF pathway. We observed that several of these single levels could successfully differentiate FEP and their siblings from the HCs.

**DISCUSSION AND CONCLUSION:** In the present study, plasma levels of proteins in the tPA-BDNF pathway, cortisol and ACTH of drug-naïve FEP patients, UAS of these patients and HC were compared for possible endophenotypes.

The primary finding of the current study is that the ratios of pro-BDNF/ mature BDNF and p75NTR / TrkB were significantly higher in FEP patients and their UAS compared to the HC. The delicate balance between stimulatory and inhibitory proteins in the tPA-BDNF pathway is very important in maintaining homeostasis in the brain. A disruption of this balance towards enhanced apoptosis may trigger synaptic pruning and contribute towards the pathogenesis. It is also very important to mechanistically investigate the pathogenesis of psychosis in the UAS by establishing endophenotypes in SZ. Further research is essential to better define the possible risk of disease in UAS and to understand the possible mechanisms that protects the UAS from disease.

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**Keywords:** apoptosis; BDNF, Endophenotype, neurotrophin; proBDNF; schizophrenia; synaptic Pruning, unaffected siblings

**Table 1.** Comparison of biochemical values of patients with first-episode psychosis (FEP) / unaffected sibling (UAS) of patients and healthy control (HC) groups (mean  $\pm$  SD (median))

	Healthy Controls (n:67)	Unaffected Sibling of FEP (n:40)	FEP(n:40)	df	p
m-BDNF	7.61 $\pm$ 3.50(6.8)	2.82 $\pm$ 1.84(2.31) <sup>a</sup>	4.84 $\pm$ 3.56(3.77) <sup>a,b</sup>	2	<0.001*
Pro-BDNF	0.910 $\pm$ 0.569(0.918)	0.539 $\pm$ 0.664(0.264) <sup>a</sup>	0.930 $\pm$ 0.755(0.65) <sup>a</sup>	2	0.001*
p75NTR	44.6 $\pm$ 45.3(34.2)	22.7 $\pm$ 40.5(6.12) <sup>a</sup>	46.62 $\pm$ 50.30(31.4) <sup>a</sup>	2	0.006*
TrkB	60.1 $\pm$ 36.8 (68)	16.5 $\pm$ 26.8(4.72) <sup>a</sup>	35.43 $\pm$ 35.8(22.5) <sup>a</sup>	2	<0.001*
PAI-1	17.1 $\pm$ 9.91(20.9)	5.89 $\pm$ 6.68(3.42) <sup>a</sup>	11.9 $\pm$ 9.46(9.14) <sup>a,b</sup>	2	<0.001*
tPA	50.1 $\pm$ 33.2(61.7)	24.8 $\pm$ 26.6(16.57) <sup>a</sup>	41.18 $\pm$ 32.9(33.8)	2	0.003*
ACTH	19.6 $\pm$ 16.1(15.5)	26.7 $\pm$ 11.9(23.6) <sup>a</sup>	57.02 $\pm$ 52.16(44) <sup>a,b</sup>	2	<0.001*
Cortisol	8.62 $\pm$ 3.95	10.3 $\pm$ 3.42	14.5 $\pm$ 5.3 <sup>a</sup>	2	<0.001*
pro-BDNF/m-BDNF	0.60 $\pm$ 0.53(0.47)	1.27 $\pm$ 0.94(1.38) <sup>a</sup>	1.41 $\pm$ 0.91(1.54) <sup>a</sup>	2	<0.001*
p75NTR/TrkB	0.115 $\pm$ 0.46(0.109)	0.177 $\pm$ 0.098(0.180) <sup>a</sup>	0.193 $\pm$ 0.086(0.188) <sup>a</sup>	2	<0.001*

\* $p < 0.05$ , FEP: First Episode Psychosis, m-BDNF: Mature Brain Derived Neurotrophic Factor, pro-BDNF: Precursor Brain Derived Neurotrophic Factor, NTR: Neurotrophic Receptor, TrkB: Tropomyosin receptor kinase B, PAI-1: Plasminogen Activator Inhibitor, tPA: Tissue Plasminogen Activator, ACTH: Adrenocorticotrophic Hormone. Kruskal Wallis test and One-Way ANOVA test were performed. For One-Way ANOVA, homogeneity was determined with Levene Statistic test and Tukey test was applied if the data showed homogeneous distribution. In the pairwise comparison of the data with significant differences in Kruskal Wallis test, Bonferroni correction was applied and p value was taken as 0.017. a  $p < 0.05$  or  $p < 0.017$  (Compared with healthy control group) b  $p < 0.05$  or  $p < 0.017$  (Compared with healthy sibling of FEP group)

**Table 2.** Investigation of the correlation between biochemical markers of the tPA/PAI-1 pathway and stress hormones.

	m-BDNF	pro-BDNF	p75NTR	TrkB	PAI1	tPA	ACTH	Cortisol	pro-BDNF/m-BDNF	p75NTR/TrkB
m-BDNF	1									
pro-BDNF	0.77***	1								
p75NTR	0.67***	0.93***	1							
TrkB	0.92***	0.85***	0.79***	1						
PAI1	0.82***	0.88***	0.86***	0.89***	1					
tPA	0.72***	0.88***	0.86***	0.80***	0.87***	1				
ACTH	-0.21*	-0.01	0.03	-0.17*	-0.15	-0.09	1			
Cortisol	-0.22*	-0.07	-0.07	-0.21*	-0.19*	-0.13	0.53***	1		
pro-BDNF/m-BDNF	-0.14	0.51***	0.55***	0.07	0.26**	0.43***	0.27**	0.19*	1	
p75NTR/TrkB	-0.2*	0.56***	0.53***	-0.06	0.23**	0.34***	0.23**	0.12	0.83***	1

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , Spearman correlation test was performed. m-BDNF: Mature Brain Derived Neurotrophic Factor, pro-BDNF: Precursor Brain Derived Neurotrophic Factor, NTR: Neurotrophic Receptor, TrkB: Tropomyosin receptor kinase B, PAI-1: Plasminogen Activator Inhibitor, tPA: Tissue Plasminogen Activator, ACTH: Adrenocorticotrophic Hormone

## EFFORT-BASED DECISION MAKING IN FIRST-EPIISODE PSYCHOSIS, FAMILIAL AND CLINICAL HIGH-RISK FOR PSYCHOSIS

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**INTRODUCTION AND AIM:** Patients with schizophrenia are more reluctant to expend efforts for reward. This reluctance is important since it could affect the social and occupational functioning of the individuals. The degree of decision-making effort in chronic samples with schizophrenia patients varies according to the size of the reward value and probability. There is limited evidence of motivational deficits in earlier phases of psychotic disorders. Few studies investigated motivational deficits in subjects with first-episode psychosis (FEP), ultra-high-risk psychosis (UHR), and familial-high-risk for psychosis (FHR) individuals. This study aimed to evaluate the effort for reward in subjects who had the first episode of psychosis, the variation of this effort according to the size and probability of reward; and to compare the changes in the effort for the reward with the FHR, UHR, and healthy control groups. We also aimed to assess whether these deficits in the willingness to expend effort for rewards are related to negative symptoms, cognition, positive thought disorder, depression, subthreshold psychotic symptoms, duration of untreated psychosis, and medication.

**METHOD:** In this study, effort-based decision-making and global cognition were compared in patients with the FEP (n=45), UHR individuals (n=59), FHR individuals (n=38), and healthy controls (n=32). The ages of the participants ranged from 13 to 29. Risk groups were determined according to the Structured Interview for Prodromal Syndromes (SIPS).

Effort-based decision-making has been evaluated using Effort-Expenditure for Rewards Task (EEfRT). This test evaluates individuals' efforts based on reward magnitude and probability. Global cognition scores were calculated by a factor analysis based on a comprehensive neurocognitive battery. Negative symptoms were assessed with the Brief Negative Symptom Scale (BNSS). Depression scores were evaluated with the Hamilton Depression Rating Scale. We used the Scale for the Assessment of Positive Symptoms (SAPS) to assess positive thought disorder. Psychotic symptoms that did not reach the psychotic level were evaluated according to the psychosis sub-scores of the SIPS. Chlorpromazine equivalent doses were calculated for individuals having medical treatment.

One-way ANOVA was used to compare global cognition among the groups. For EEfRT, the data were analyzed using a mixed model repeated measures ANOVA with the group as a between-subject factor and both probability and reward level (low, medium, high) as within-subjects factors. Correlations with global cognition, negative symptoms,

depression scores, positive thought disorder, duration of untreated psychosis, subthreshold psychotic symptoms, and chlorpromazine equivalents have been tested using Pearson's product-moment correlations. The p-values were corrected to account for multiple comparisons in correlation analysis. The Bonferroni correction method has been used, dividing the unadjusted p-values by the number of tests.

**RESULTS:** There were significant differences in global cognition between groups ( $F=30,876$ ,  $p<0,01$ ). The main effect for interaction between probability, reward, and the group was significant in EEfRT ( $F=4,261$   $p<0,001$ ). Post hoc tests for the repeated measures ANOVA showed significant differences between patients with FEP and other groups for EEfRT. In terms of the likelihood of hard task choices, conditions that differed between groups were medium probability-high reward ( $F=5,659$ ,  $p=0,005$ ), high probability- medium reward ( $F=8,671$   $P<0,001$ ), and high probability-high reward ( $F=23,150$   $P<0,001$ ). The likelihood of choosing the hard task in these three situations wasn't correlated with negative symptoms, positive thought disorder, depression, duration of untreated psychosis and medication. Cognition was found to be associated with choosing the hard task only in the high probability-high reward situation ( $p=0.004$ ). Although there were no significant differences in the corrected analyzes for patients with UHR compared to the control group, a significant difference was found in the uncorrected analyzes for EEfRT. Conditions that showed significant differences between patients with UHR and healthy controls were high probability- medium reward ( $P<0,01$ ) and high probability-high reward ( $P<0,01$ ). Impaired global cognition was associated with reduced effort in these two situations ( $p<0,008$ ).

**DISCUSSION AND CONCLUSION:** Deficits in the willingness to expend effort for rewards were evident in FEP but not in risk groups. These findings suggest that the motivational disorder was not evident in most individuals with genetic and clinical risk for psychosis. In our study, impairment in reward processing wasn't found to be associated with negative symptoms severity, cognitive deficits, use of antipsychotics, depression, duration of untreated psychosis, and positive thought disorder. The relationship of EEfRT with negative symptoms and positive symptoms has not been clarified yet. Previous studies showed inconsistent findings. Our study provides additional evidence for the impairment in effort for a reward could not be considered as strong endophenotypic marker for psychosis. However, the lack of marked deterioration in EEfRT does not mean that it doesn't exist in patients with UHR. The association between EEfRT and global cognition in the UHR group indicates that impairment can be observed in some subgroups of individuals at risk for psychosis. Further research is needed on this subject.

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**Keywords:** psychosis, reward, effort, schizophrenia, motivation

**Table 1.** Post-hoc between-subjects effects in mixed model repeated measures

	F	p
medium probability-high reward	5,659	0.005
high probability- medium reward	8.671	<0.001
high probability-high reward	23.150	<0.001

*The likelihood of hard task choices according to probability and reward*

## RAC-04

### ALTERATION OF GLOBAL SIGNAL TOPOGRAPHY OF SELF AND SENSORY INPUT REGIONS IN SCHIZOPHRENIA

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**INTRODUCTION AND AIM:** It has been shown that alteration of functional connectivity between various networks and regions in Schizophrenia compared to healthy controls with regression of global signal from the fMRI time series as a nuisance, i.e. noise. However, global signal includes global functional connectivity with a neural source [1]. Recent studies show a link between global changes in the brain measured by global signal correlation and clinical severity of psychiatric disorders [2][3][4]. Current study shows alteration of global signal topography in sensorial regions, alongside regions and networks related to self in schizophrenia in resting state for potential causal mechanism for deficits in schizophrenia such as cognitive disabilities, psychomotor retardation.

**METHODS:** Thirty schizophrenia (SZ) patients & 26 healthy controls (HC) studied with functional magnetic resonance imaging (fMRI). Informed consent was obtained from all participants. Two groups matched for age, gender and education. 8 minutes resting-state fMRI data acquired (180 images) and preprocessed with AFNI Software. Global signal was not regressed from time series as noise during preprocessing. Self ROIs were selected from a meta analysis about regions related with interoceptive, exteroceptive and mental aspects [5]. Sensorial regions' ROIs were defined according to previous studies about hierarchical organization in sensory cortices such as somatosensory, visual and auditory [6]. Aforementioned ROIs were merged to calculate layer-wise global signal correlation (GSCORR). In order to calculate GSCORR, fMRI BOLD signal time-series were averaged across voxels in a ROI and Pearson correlation with brain time series was calculated before fisher-Z transformation of obtained r-values. Global signal correlation defines global signal topography [2]. In order to probe topographical change, the effect of each layer on GSCORR is measured with one-way ANOVA test.

**RESULTS:** Interoceptive layer of Self showed higher GSCORR in HC (M=0.458, SD=0.215) than SZ (M=0.251, SD=0.189),  $t(54)=50.261, p<.001$ . There was no significant effect between SZ (M=0.759, SD=0.190) and HC (M=0.669, SD=0.219) for Mental Layer,  $t(54)=49.947, p=.110$ . Exteroceptive Layer exhibited significant effect with higher GSCORR in HC (MSZ=0.538, SDSZ=0.227, MHC=0.691, SDSZ=0.301,  $t(54)=46.054, p=0.039$ ), however eliminated after multiple comparison. Among Wengler sensorial regions,

only somatosensory regions showed higher GSCORR in HC (M=0.722, SD=0.180) than SZ (M=0.868, SD= 0.199),  $t(54)=50.965, p<.05$ ; whereas visual and auditory layers did not show any statistical difference between groups. In both SZ and HC, there was a significant effect of layers on both three groups' GSCORR at  $p<.05$  [(FSZ(1,88)=17.38,  $p<.001$ ), (FHC(1,76)=11.17,  $p<.05$ )]. In SZ, Tukey's Post-hoc test revealed higher GSCORR in Mental (M=0.759, SD= 0.190) compared to Exteroceptive (M=0.538, SD=0.227) and Interoceptive (M=0.251, SD=0.189). However in HC, Mental (M=0.669, SD= 0.219) and Exteroceptive (M=0.691, SD= 0.301) did not differ significantly while Interoceptive exhibited lower GSCORR (M=0.458, SD=0.215). There was no intragroup effect of different layers on GSCORR of sensory regions.

**CONCLUSIONS:** SZ and HC exhibited different global signal topography than each other in resting-state fMRI. Decreased GSCORR in somatosensory in SZ than HC with decreased intero-exteroceptive Self GSCORR shows decreased effect of respective regions to global functioning of brain. Findings might explain psychomotor slowing and learning deficits in SZ.

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**Keywords:** Schizophrenia, Global Signal, Self, Topography

## RAC-05

### EVALUATION OF COGNITIVE FUNCTIONS IN MAJOR DEPRESSION AND BIPOLAR DISORDER PATIENTS WITH AND WITHOUT SUICIDE ATTEMPTS

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**INTRODUCTION AND AIM:** Many studies in the most recent literature reveal that cognitive dysfunctions persist during the remission stage of Bipolar Disorder (BD) and Major Depression (MD). Suicide attempts are regarded to be one of the variables that contribute to the decline of cognitive functions. The aim of this study was to compare the cognitive functions of BD and MD patients in remission with and without attempts at suicide, as well as to assess the impact of disorders and suicide on cognitive functions.

**METHOD:** Between June 2020 and March 2021, patients diagnosed with BD (n=40) and MD (n=40) by clinical interview using DSM-5 diagnostic criteria were enrolled in the study at Eskişehir Osmangazi University Psychiatry Department outpatient clinics. All of the patients were in remission, and 19 of the BD patients and 21 of the MD patients had attempted suicide. The study also included 20 healthy controls. Motor Screening Task (MOT), One Touch Stockings of Cambridge (OTS), The Emotion Recognition Task (ERT), and Spatial Working Memory (SWM) tests from the Neuropsychological Test Automated Battery (CANTAB) were used to evaluate cognitive functioning. Written informed consent prior to participation was given by all participants. Local Ethics Committee approved our study (06.08.2019, number 16).

**RESULTS:** In cognitive functions such as executive functions, working memory, and emotion recognition skills, the BD and MD groups fared worse than the healthy controls ( $p=0,002$ ,  $p=0,002$ ,  $p=0,029$ ,  $p=0,025$ ,  $p=0,003$ ,  $p<0,001$ ,  $p=0,023$ ,  $p=0,003$ ,  $p=0,018$ ,  $p=0,002$ ,  $p=0,008$ ,  $p=0,0167$ ,  $p=0,019$ ,  $p=0,034$ ,  $p=0,031$ ,  $p=0,027$ ,  $p=0,004$ ,  $p=0,010$ ). The participants who attempted suicide had more impairment, particularly with executive functions and emotion recognition ( $p=0,006$ ,  $p=0,033$ ,  $p=0,042$ ,  $p=0,033$ ,  $p=0,042$ ,  $p=0,003$ ,  $p=0,045$ ,  $p=0,002$ ,  $p=0,009$ ,  $p=0,032$ ,  $p=0,033$ ). It was determined that the group that attempted suicide had difficulty in recognizing the feelings of fear and happiness, while the group that did not attempt suicide had difficulty in recognizing the feelings of disgust and anger ( $p=0,045$ ,  $p=0,002$ ,  $p=0,032$ ,  $p=0,009$ ,  $p=0,0060$ ,  $p=0,0230$ ,  $p=0,029$ ).

**DISCUSSION AND CONCLUSION:** Our findings revealed that attempting suicide results in a greater loss of neurocognitive performance. In terms of cognitive functions, there was no significant difference between the patient groups, and both patient groups sustained losses in various measures when compared to healthy controls. Patients with BD were found to have more difficulties in determining strategies and recognizing emotions. When the suicide attempt is examined in detail, it is believed that the suicide attempt may have a negative impact on executive processes and the ability to perceive emotion. It is clear that larger sample groups are required to assess the impact of suicide attempts on cognitive functioning, and research examining the impact of suicide attempts, particularly on the awareness of distinct emotions, are required.

**Keywords:** bipolar, depression, cognitive, suicide

**Table 1.** CANTAB key data comparison

			Mean+/- Standard Deviation Median (Q1-Q3)			p	Multiple Comparison p*
	BBi+ (n=19) (1)	BBi- (n=21) (2)	MDi+ (n=21) (3)	MDi- (n=19) (4)	Kontrol (n=20) (5)		
MOTML	1180 ± 572 1060 (784-1590)	1140 ± 522 959 (851-1230)	1240 ± 524 1220 (876-1420)	996 ± 263 1000 (825-1160)	759 ± 175 677 (627-927)	<0,001d	2-5: 0,002 3-5: 0,002 4-5: 0,029
OTSPSFC	7.42 ± 5.04 8.00 (2.00-12.0)	6.29 ± 4.80 5.00 (2.00-10.0)	6.62 ± 3.65 7.00 (4.00-9.00)	8.53 ± 4.02 10.0 (5.00-11.0)	12.1 ± 1.54 12.0 (11.0-13.0)	<0,001c	1-5: 0,025 2-5: 0,003 3-5: <0,001 4-5: 0,023
SWMBE4	1.42 ± 1.68 1.00 (0-2.00)	2.33 ± 1.28 3.00 (2.00-3.00)	2.48 ± 3.00 2.20 (1.73-3.07)	1.58 ± 1.74 1.00 (0-3.00)	0.632 ± 1.21 0 (0-0.500)	0.0101d	2-5: 0,003
SWMBE468	20.5 ± 6.59 21.0 (16.5-26.5)	23.1 ± 8.53 25.0 (20.0-28.0)	19.9 ± 10.4 21.0 (14.0-27.0)	19.1 ± 9.77 22.0 (14.5-25.5)	11.6 ± 8.66 13.0 (4.00-15.0)	0.00258d	1-5: 0,018 2-5: 0,002
SWMBE6	6.11 ± 3.23 7.00 (4.00-9.00)	6.86 ± 2.95 7.00 (6.00-9.00)	5.29 ± 3.51 6.00 (2.00-7.00)	5.74 ± 3.18 6.00 (3.50-7.50)	3.32 ± 2.93 3.00 (0.500-5.00)	0.00924d	2-5: 0,008
SWMBE8	12.9 ± 3.58 13.0 (11.5-15.5)	14.0 ± 5.66 16.0 (12.0-18.0)	12.9 ± 6.33 14.0 (11.0-17.0)	11.7 ± 6.34 13.0 (9.50-17.0)	7.63 ± 6.64 9.00 (0-12.0)	0.0167d	2-5: 0,019
SWMS	9.11 ± 1.59 9.00 (9.00-10.0)	9.48 ± 1.47 10.0 (8.00-10.0)	9.24 ± 1.97 9.00 (8.00-10.0)	9.11 ± 2.31 9.00 (8.00-11.0)	7.63 ± 1.74 8.00 (6.00-9.00)	0.0184c	2-5: 0,014
ERTRT	4510 ± 3870 3100 (2610-4400)	3310 ± 1230 3010 (2650-3660)	4020 ± 2260 3680 (2980-4850)	3230 ± 1060 3230 (2510-4090)	2540 ± 887 2460 (1970-2620)	0.0192d	1-5: 0,034
ERTTH	51.1 ± 10.1 53.0 (45.0-59.5)	47.4 ± 14.7 47.0 (40.0-59.0)	54.1 ± 8.61 55.0 (51.0-60.0)	52.5 ± 10.4 55.0 (51.5-58.0)	59.9 ± 6.19 61.0 (56.0-64.0)	0.00882c	1-5: 0,031 2-5: 0,027
ERTTHD	8.32 ± 3.68 9.00 (8.00-10.5)	7.05 ± 4.28 8.00 (3.00-11.0)	8.48 ± 3.49 8.00 (7.00-11.0)	6.95 ± 2.99 8.00 (6.00-8.50)	10.3 ± 2.26 11.0 (9.00-11.5)	0.0143c	4-5: 0,004
ERTUHRS	0.365 ± 0.128 0.420 (0.300-0.460)	0.350 ± 0.222 0.360 (0.190-0.540)	0.425 ± 0.167 0.420 (0.300-0.540)	0.378 ± 0.171 0.390 (0.295-0.475)	0.511 ± 0.110 0.540 (0.425-0.590)	0.0221d	1-5: 0,010

c: One Way Analysis of Variance test, d: Kruskal Wallis test, p\*: Holm - Sidak's Multiple Comparison test, BBi+: Bipolar Disorder with suicide attempt, BBi-: Bipolar Disorder without suicide attempt, MDi+: Major Depression with suicide attempt, MDi-: Major Depression without suicide attempt.

**Table 2.** Significant data in comparison of combined groups

		Mean±/ Standard Deviation Median (Q1-Q3)		p	Multiple C omparison P*
	İVAR (n=40) (1)	İYOK (n=40) (2)	Control (n=19) (3)		
OTSMCC5	2.34 ± 1.25 1.67 (1.33 - 3.33)	2.08 ± 1.04 1.67 (1.33 - 2.67)	1.40 ± 0.540 1.33 (1.00 - 1.50)	0.00545d	1-3: 0,006
OTSMDLF1	6670 ± 3900 5570 (3860 - 7940)	12800 ± 11800 11000 (6560 - 14300)	9960 ± 6160 7980(6370 - 11400)	0.00107d	1-3: 0,033
OTSMDLF2	13000 ± 13500 8500 (5850 - 14700)	10500 ± 9600 7770 (5120 - 10600)	5750 ± 2170 5010 (4480 - 6730)	0.00302d	1-3: 0,042
OTSMLF1	12800 ± 11800 11000(6560 - 14300)	9960 ± 6160 7980 (6370 - 11400)	6670 ± 3900 5570 (3860 - 7940)	0.00107d	1-3: 0,033
OTSMLF2	13000 ± 13500 8500 (5850 - 14700)	10500 ± 9600 7770 (5120 - 10600)	5750 ± 2170 5010 (4480 - 6730)	0.00302d	1-3: 0,042
ERTCRT	1460 ± 556 1270 (1090 - 1700)	1330 ± 396 1280 (1090 - 1450)	1040 ± 216 973 (916 - 1080)	<0.001c	1-3: 0,003
ERTCRTF	2080 ± 1100 1660 (1310 - 2410)	2070 ± 877 1910 (1410 - 2570)	1450 ± 542 1330 (1000 - 1750)	0.0153d	1-3: 0,045
ERTCRTH	1160 ± 461 1030 (848 - 1410)	01000 ± 361 908 (744 - 1210)	783 ± 153 744 (682 - 869)	<0.001d	1-3: 0,002
ERTRT	4260 ± 3100 3390 (2610 - 4530)	3270 ± 1140 3110 (2520 - 3850)	2440 ± 1000 2460 (1820 - 2620)	0.00186d	1-3: 0,009
ERTRTF	2330 ± 1380 1870 (1420 - 2760)	2250 ± 900 2140 (1660 - 2730)	1560 ± 609 1430 (1200 - 1760)	0.0124d	1-3: 0,032
ERTRTH	1320 ± 581 1120 (987 - 1650)	1210 ± 463 1170 (845-1480)	905 ± 281 795 (744 - 998)	0.00156c	1-3: 0,009
ERTRTS	2030 ± 1260 1720 (1260 - 2330)	1930 ± 844 1890 (1240 - 2230)	1330 ± 454 1120 (959 - 1620)	0.00283c	1-3: 0,033
ERTTHD	8.40 ± 3.54 9.00 (7.00 - 11.0)	7.00 ± 3.68 8.00 (4.75-9.00)	10.0 ± 2.45 10.0 (8.50 - 11.5)	0.00758d	2-3: 0,006
ERTTHF	8.26 ± 2.33 8.00 (7.50 - 9.50)	6.63 ± 2.78 6.00 (4.75 - 8.00)	6.05 ± 3.37 6.50 (3.00 - 9.00)	0.0343c	2-3: 0,023
ERTUHRA	0.358 ± 0.152 0.375 (0.270 - 0.450)	0.317 ± 0.166 0.340 (0.213 - 0.438)	0.436 ± 0.186 0.470 (0.345 - 0.550)	0.04144	2-3: 0,029

c: One Way Analysis of Variance test, d: Kruskal Wallis test, p\*: Holm-Sidak's Multiple Comparison test, İVAR: Combined group with suicide attempt, İYOK: Combined group without suicide attempt

## RAC-06

### ROLE OF NLRP3 INFLAMMASOMES IN PATIENTS WITH BIPOLAR I DISORDER

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**INTRODUCTION AND AIM:** Accumulating evidence has shown that the activation of immune cells plays important role in the etiology of bipolar disorder (BD). Many studies have demonstrated the role of peripheral inflammatory immune responses in addition to central inflammatory immune responses in the etiology of BD (1). Immune responses, both innate and adaptive, have been demonstrated to cause a variety of morphological and functional changes in the brain that contribute to its growth, maturation, and degeneration. The innate immune system recognizes danger signals originating by host proteins and pathogens and mount the appropriate immune response.

The NLRP3 (which encodes NOD-, LRR- and pyrin domain-containing protein 3) inflammasome is a critical component of the innate immune system and inflammatory responses, as it promotes the maturation

and release of two pleiotropic cytokines, interleukin-1 $\beta$  (IL-1 $\beta$ ) and interleukin-18 (IL-18), and cell death. NLRP3 inflammasome contains the adapter protein apoptosis-associated speck-like protein containing a caspase recruitment domain (ASC) procaspase-1, and NLRP3 protein (2). The P2X7 receptor (P2X7R), a plasma membrane channel that is directly triggered by extracellular adenosine triphosphate (ATP), is required for NLRP3 inflammasome activation. ATP is a primary danger-associated molecular pattern (DAMP) generated by damaged parenchymal cells, dying leukocytes, and activated platelets during inflammation.

Recent research has revealed that NLRP3 activation is essential in the etiology of various mental and neurodegenerative disorders and that the NLRP3 pathway might connect stress and neuroinflammatory processes. The effects of the NLRP3 inflammasome and P2X7R on Bipolar Disorder have only been studied in a few research. This study aimed to examine gene expression levels of NLRP3, P2RX7, IL-1 $\beta$ , and IL-18 in peripheral blood mononuclear cells (PBMCs) between patients with Bipolar I Disorder (BD-I) in remission and healthy controls to see if there was a link between these parameters and clinical aspects of bipolar disorder.

**METHOD:** Study Design This cross-sectional study was conducted between patients with BD-I (n=35) and healthy controls (n=35), who were followed up in the outpatient psychiatry outpatient clinic of Suleyman Demirel University Faculty of Medicine for at least 1 year. The study was approved by the Clinical Research Ethics Committee of Suleyman Demirel University Faculty of Medicine (Date:03.02.2021; No:48).

#### Participants

The patient who has been attending follow-ups regularly for at least 12 months, has had no exacerbation of symptoms, and has not changed pharmacological therapy in the past 12 months was included in the patient group. Patients with concurrent neurological disease, pregnancy, alcohol or substance abuse, any mental condition other than BD-I, acute or chronic infection, autoimmune, allergy, hepatic, renal, cardiac, endocrine, or immunosuppressive, corticosteroid, or anti-inflammatory medications were excluded.

#### Clinical assessment

Data forms containing sociodemographic and clinical information (SKIP-TURK) were filled in by the researchers and the Young Mania Rating Scale (YMRS), Hamilton Depression Rating Scale (HAM-D), Brief Functioning Assessment Scale (FAS), and Global Assessment Scale (GAF) were applied.

Analysis of gene expression by RT-qPCR analysis Mononuclear cells were isolated from peripheral blood samples collected from the participants and NLRP3, P2RX7, IL-1 $\beta$ , and IL-18 gene expression levels were measured by the RT-PCR method.

#### Statistical Analysis

All statistical analyses were conducted using SPSS 20.0. The significance level was accepted as p<0.05.

**RESULTS:** The demographic characteristics of the participants and the clinical features of the patients Table 1 summarizes the demographic characteristics of the participants, their gene expression levels, and the clinical characteristics of patients with BD-I. There were no significant differences in age or gender between groups. The average duration of illness for patients with BD-I was 11 ± 8.7 years. There was a significant difference in GAF and FAST ratings between the patient and control groups (<0.001, for each).

### mRNA levels in BD cases compared with controls

The mean expression ( $\pm$ SD) of genes between groups is shown in Table 1. NLRP3, IL-1 $\beta$ , and IL-18 expression levels were significantly higher in PBMCs of SCZ patients than in HC subjects (FC=2,31,  $p=0,001$ ; FC=2,40,  $p=0,001$ ; FC=1,76,  $p<0,001$ , respectively). The expression levels of the P2RX7 gene were not statistically different between the groups (FC=1.86,  $p=0.095$ ).

### Expression levels and clinical correlates

Positive correlations were found between NLRP3 gene expression levels and the number of episodes ( $r=0,750$ ,  $p<0,001$ ), respectively.

**DISCUSSION AND CONCLUSION:** In the present study, we showed that NLRP3 inflammasome activation and pro-inflammatory cytokines IL-1 $\beta$  and IL-18 were increased in PBMCs of BD-I patients compared to healthy controls.

Evidence from animal models and humans suggested that the NLRP3 inflammasome may have a role in the etiology of neuropsychiatric disorders. However, there has only been a small amount of research into the significance of the NLRP3 inflammasome in the etiology of bipolar disorder. A higher level of NLRP3 was found in the postmortem frontal cortices of bipolar disorder patients compared to healthy controls (3). In another study, gene expression levels of the NLRP3-related proteins NLRP3, ASC, and pro-casp1 were observed to be upregulated in BD patients (4). Similar to the findings we obtained in our study, no difference was found in the P2RX7 gene and protein expression between euthymic BD patients and matched healthy controls in the studies of Gubert et al (5).

There are some limitations in our study. Because our sample size was small, our findings can be generalized to a larger population. Patients with BD-1 in remission were included in this study. Longitudinal studies are needed to evaluate changes in the NLRP3 inflammasome pathway during the disease exacerbation. The patients were under different treatment. There is a need for larger cohort studies with first-episode, drug-naive patients with BD-1.

The involvement of NLRP3 inflammation in bipolar disorder etiology is less well understood than in other psychiatric diseases. In conclusion, this study demonstrated the possible role of the NLRP3 inflammasome in bipolar disorder. Therefore, we suggest that the biological genesis of BD-I may be a cytokine-mediated inflammatory response induced by hyperactive innate immunity. The NLRP3 inflammasome may serve as a biomarker for bipolar disorder, and its regulation pharmacologically may be a promising treatment target.

**Keywords:** Bipolar Disorder, Inflammasome, NLRP3, P2RX7, IL-1 $\beta$ , IL-18

**Table 1.** Demographic, clinical characteristics, and gene expression levels of patients with bipolar I disorder and controls

Characteristic	Bipolar disorder (n=35)	Controls (n=35)	p-value
Age [mean (SD)]	39,2 $\pm$ 10,9	38,1 $\pm$ 8,6	0,655a
Gender, males [n (%)]	18 (%51)	16 (%46)	0,811b
Duration of illness (years)	11 $\pm$ 8,7b		
The number of episodes [median (minimum-maximum)]	3 (1-12) b		
GAF [mean (SD)]	82,2 $\pm$ 8,2	91,7 $\pm$ 5,7	<0,001c
FAST [mean (SD)]	4,4 $\pm$ 1,9	0,94 $\pm$ 1,2	<0,001c
NLRP3 [mean (SD)]	5,59 $\pm$ 7,22	1,42 $\pm$ 0,94	0,001a
P2RX7 [mean (SD)]	1,40 $\pm$ 1,41	2,02 $\pm$ 1,58	0,095a
IL-1 $\beta$ [mean (SD)]	5,28 $\pm$ 6,89	1,29 $\pm$ 0,88	0,001a
IL-18 [mean (SD)]	2,11 $\pm$ 1,68	1,31 $\pm$ 1,12	<0,001a

GAF: Global Assessment of Functioning; FAST: Functioning Assessment Short Test; SD: standard deviation. a Student's t-test, b Chi-square test, c Mann-Whitney U test.

**Table 2.** Correlation between clinical features of patients with bipolar I disorder and gene expression

Genes	Duration of illness	GAF	FAST	The number of episodes
NLRP3 (r)	0,191	0,017	0,620	0,750
NLRP3 (p)	0,264	0,922	0,722	<0,001
P2RX7 (r)	-0,120	-0,243	0,152	-0,116
P2RX7 (p)	0,491	0,159	0,384	0,549
IL-1 (r)	-0,106	-0,112	0,116	0,113
IL-1 (p)	0,546	0,521	0,507	0,558
IL-18 (r)	0,109	0,059	-0,068	0,350
IL-18 (p)	0,534	0,738	0,698	0,062

GAF: Global Assessment of Functioning; FAST: Functioning Assessment Short Test. Pearson correlation analysis was used. The (-) sign indicates a negative correlation.

## RAC-07

### INVESTIGATION OF THE DRIFT DIFFUSION MODEL AS AN ENDOPHENOTYPE IN OBSESSIVE-COMPULSIVE DISORDER

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**INTRODUCTION AND AIM:** In our study, firstly, it was aimed to examine the decision-making processes of obsessive compulsive disorder (OCD) patients under uncertain and conflicting conditions with drift diffusion model (DDM), which is a sequential sampling model. At the same time, whether the siblings of patients with OCD show similar decision-making processes was examined with the same model, and thus, it was aimed to examine the multidimensional characteristics of compulsive behaviors, the underlying decision-making processes and the resulting deterioration as an endophenotype according to behavioral analyzes.

**METHOD:** The study included 43 patients with OCD, 37 siblings who were not affected by the disease, and 51 healthy controls matched with the patients in terms of age, gender and education year. A Sociodemographic Data Form, Structured Clinical Interview Scale for DSM-IV Axis 1 Disorders (SCID I), The Dimensional Yale Brown Obsessive Compulsive Scale (DY-BOCS), Beck Depression Inventory (BDI), Digit Span (DS) Backwards Test, Digit Symbol Substitution Test (DSST) were applied to the participants participating in the study. By applying the two-step task, which was originally developed to distinguish the effects of the model-based and non-model control system, second stage reaction times and accuracy of responses of subjects were fitted to Hierarchical Bayesian DDM analysis (HDDM) in order to estimate DDM parameters including the drift rate ( $v$ ) and boundary separation (a).

**RESULTS:** In our study, it was determined that all groups had similar drift rate ( $v$  parameter) values under high conflict conditions, while the OCD patient group showed lower drift rate values compared to the control group under low conflict conditions. While there was no significant difference in the drift rate for the OCD patient group compared to the control group under high uncertainty conditions, it was found to be significantly lower than the control group in low and medium uncertainty conditions. When the results regarding the threshold (a parameter) levels are examined, no significant difference was found between the groups at different conflict and uncertainty levels. It was determined that the sibling group showed lower drift rate values compared to the control group, similar to the OCD patient

group, under low conflict conditions. It was found that the drift rate for the sibling group was significantly lower than the control group under high uncertainty conditions, and a significant decrease was found in the drift rate under low uncertainty conditions, similar to the OCD patient group.

**DISCUSSION AND CONCLUSION:** The findings of our study showed that there are deteriorations in the underlying decision-making processes in different conflict and uncertainty conditions in OCD. In our study, which investigated the decision-making processes and the resulting impairments in OCD as an endophenotype for the first time, it was found that the unaffected sibling group had similar impairments to the patient group. Therefore, the results of our study showed that existing impairments can be handled endophenotypically in OCD.

**Keywords:** Conflict, drift diffusion model, endophenotype, obsessive-compulsive disorder, uncertainty

RAC-08

## INVESTIGATION OF SIBLINGS OF PATIENTS DIAGNOSED WITH SUBSTANCE-INDUCED PSYCHOTIC DISORDER IN TERMS OF COGNITIVE FUNCTIONS AND CLINICAL HIGH-RISK STATE FOR PSYCHOSIS

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**INTRODUCTION AND AIM:** The DSM-5 defines "Substance-Induced Psychotic Disorder" as delusions and/or hallucinations during or soon after substance intoxication or withdrawal of a substance based on evidence from the history, physical examination, or laboratory findings in cases that cannot be explained by delirium or another psychotic disorder.

The questions on the relationship between substance use and psychotic disorder investigate whether substance use causes psychosis, whether substances are used to alleviate the effects of existing psychiatric illness, or whether the underlying psychiatric illness is triggered by substance use. Several studies report that cannabinoids increase the risk of psychosis 2- to 6-fold and that there is a dose-response relationship between the use of cannabinoids and psychosis. Based on the hypothesis that cannabinoids alone cannot lead to the development of psychosis; many studies have investigated various factors that may affect the relationship between cannabinoids and psychosis such as genotype, age, educational status, personality traits, socioeconomic risk factors, social functionality, IQ, use of other substances, pre-existing psychotic disorder before cannabinoid use, divorced parents, parental substance use, and physical and sexual abuse, reporting that the use of cannabinoids may increase the likelihood of psychotic symptoms while it exerts a much stronger effect and increases the risk of psychosis at a higher degree in individuals with psychotic predisposition compared to individuals with no psychotic predisposition.

A follow-up study investigating the transition of substance-induced psychosis to schizophrenia showed that 50% of patients previously treated with a diagnosis of cannabinoid-induced psychosis later developed a schizophrenia-spectrum disorder with a mean follow-up period of 5.9 years. Another study investigating the relationship between cannabinoid-induced psychosis and schizophrenia reported that the risk of developing a cannabis-induced psychosis was 4.51-fold higher, and the risk of developing a schizophrenia spectrum disorder was increased

3.58-fold in children whose father had a schizophrenia spectrum disorder compared to those whose father did not. These studies suggest that cannabinoid-induced psychosis may be an early marker of schizophrenia. In our study, we focused on the group with a low familial risk score for psychosis, that is, the patient group without a family history of psychosis, and we investigated the healthy siblings of these patients. The present study aims to examine the role of familial predisposition in substance-induced psychosis by examining healthy siblings of patients in terms of clinical high-risk state for psychosis, as well as schizotypy and neurocognitive functions, which are considered as endophenotypic markers for schizophrenia.

**METHODS:** For the study, we compared healthy siblings of 41 patients who were hospitalized with the diagnosis of substance-induced psychotic disorder in the largest psychiatric hospital in Turkey, who did not have a family history of other psychotic disorders, with 41 healthy volunteers without a family history of psychiatric illness who were matched for age, gender and educational status in terms of high-risk state for psychosis, schizotypal features, and neurocognitive functions. Patients' sociodemographic and clinical characteristics were obtained through data collection forms, the Comprehensive Assessment of At-Risk Mental States (CAARMS) and the Structured Interview for Schizotypy-Revised Form (SIS-R) scales were used to evaluate the clinical high risk for psychosis. Neurocognitive functions were evaluated with Digit Span Test (DST), Trail Making Test Part A-B (TMT), Verbal Fluency Test (VFT), and Stroop Test (ST).

**RESULTS:** According to the CAARMS scale, 16 (39%) of the patient relatives and 3 (7.3%) of the control group were at clinical high risk for psychosis; and a statistically significant difference was found in the rates of psychotic vulnerability ( $X^2=12.94$ ,  $p=0.002$ ). Comparison between patient relatives and control group revealed statistically significant differences between the mean SIS-R subscale scores of social isolation ( $Z=-2.47$ , 0.013), hypersensitivity ( $t=3.81$ ,  $<0.001$ ), referential thinking/being followed ( $t=3.57$ , 0.001), referential thinking/being talked about ( $Z=-3.31$ , 0.001), suspiciousness ( $t=3.98$ , 0.001), illusions ( $t=3.15$ , 0.002), goal-directedness of speech ( $Z=-3.53$ , 0.001), loosening of associations ( $Z=-2.57$ , 0.010), poverty of speech ( $Z=-3.08$ , 0.002) and overall oddness ( $Z=-3.63$ , 0.001) and the mean neurocognitive function scores of TMT-A Error ( $Z=-1.97$ ,  $p=0.049$ ), TMT- Part B Error ( $Z=-2.19$ ,  $p=0.028$ ), and TMT- Part B Correction ( $Z=-2.00$ ,  $p=0.046$ ) and the mean VFT KA out-of-category error ( $Z=2.02$ ,  $p=0.043$ ) and VFT LA perseveration ( $Z=-2.02$ ,  $p=0.044$ ) scores, in all of which patient relatives exhibited poorer performance.

**CONCLUSIONS:** Our study is the first to examine first-degree healthy relatives of patients who develop substance-induced psychosis in terms of clinical high-risk state for psychosis and neurocognitive functions. The results of our study have demonstrated that siblings of the patients exhibit higher schizotypal features and a higher risk for psychosis compared to the control group. Patient relatives showed a higher degree of impairment in neurocognitive functions of attention, response inhibition, and executive functions compared to healthy controls.

A study reported that substance-induced psychotic disorder may occur following substance use in individuals with a high familial risk for psychosis, while the transition of substance-induced psychosis to schizophrenia may occur at a higher rate in individuals in the group with a high familial risk for psychosis. We focused on the group with low familial risk, that is, the group of patients who did not have a family history of psychosis and were diagnosed with substance-induced psychotic disorder, whose siblings were assessed within the scope of our study.

High-risk groups are reported to exhibit a stationary risk of psychosis while schizotypy is reported as more of a continuous trait. In our

study, patient relatives exhibited schizotypal features at a higher rate compared to the controls; which was even higher in those at high risk for psychosis. The fact that schizotypal features, which are thought to be a trait factor reflecting genetic predisposition, are more common among patient relatives in high-risk groups may indicate that the vulnerability to psychosis is associated with genetic factors rather than environmental factors and exposure to social stressors. Considering the presence of family history among siblings of substance-induced psychosis patients, especially those at high risk for psychosis, it may be thought that the

risk of developing a psychotic disorder with or without substance use may be higher.

Prospective studies with relatives of substance-induced psychosis patients from the spectrum of psychotic disorders may shed light on the areas between the two ends of the psychotic disorder spectrum, which have not yet been elicited.

**Keywords:** Substance-induced Psychotic Disorder, Clinical High Risk State for Psychosis, Cognitive Functions, Schizotypy, Familial Predisposition

# ORAL PRESENTATIONS



SS-01

## PERSONAL RESPONSIBILITY IN SUBSTANCE USE DISORDER PATIENTS WITH OR WITHOUT CRIMINAL HISTORY

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**BACKGROUND AND AIM:** Personal responsibility has been defined as regulating one's own emotions and behavior and being accountable for the outcomes of one's choices. Personal maturity is negatively related to risk-taking behavior, which might be related to substance use disorders or criminal issues. The present study aimed to investigate the personal responsibility differences between substance use disorder (SUD) patients with a criminal history (CH+) and those without a criminal history (CH-).

**METHODS:** 84 SUD patients according to DSM-5 with a self-reported criminal history and 60 patients without any self-reported criminal history enrolled. Sociodemographic form and the Turkish version of the Personal Responsibility Scale (PRS) were administered to all participants recruited from the AMATEM clinic of Health Science University Ankara Training and Research Hospital. The Turkish version of PRS consists of 11 Likert-type questions with 1 to 5 points and three parts. The parts of the scale are social responsibility (3-15 points), awareness (4-20 points), and self-control (4-20 points). Total 11-55 points should be obtained from the scale. Higher scores mean having more personal responsibility abilities. The study's ethical approval was obtained from the hospital's ethics committee (no: E-21-783).

**RESULTS:** In the CH+ group, the mean age was 28.71±5.97, and in the CH- the group was 28.35±5.35 (p=.977). The two groups were similar in gender, marital status, education level, and paternal educational status (p=.383, p=.328, p=.406, p=.228). Patients in the CH+ group were more likely to be unemployed, and their maternal education levels were lower than CH- group (p=.046, p=.017). The mean age at first substance use in the CH+ group was 16.40±3.72, and in the CH- the group was 17.73±4.70 (p=.196). When two groups were compared in terms of PRS scores, the CH+ group got 9.73±3.13, 13.76±3.48, 15.35±3.77, 38.83±6.30 points from PRS social responsibility, PRS awareness, PRS self-control, and PRS total; and the CH- group got 10.55±2.97, 14.08±3.69, 14.67±4.04, 39.30±6.65 points (p=.103, p=.550, p=.332, p=.669).

**CONCLUSIONS:** We found similar personal responsibility levels in the present study in CH+ and CH- groups. There was no statistical difference in personal responsibility levels whether a criminal history existed. These results might be because the survey comprised only substance use disorder patients. Since substance abuse is highly risk-taking behavior, and criminal issues generally occur secondary to substance abuse-related problems, committing a crime may not affect overall personal responsibility levels. Further studies are needed comparing the personal responsibility levels between addicted people and non-addicts and evaluating crime issues in substance use disorder.

**Keywords:** criminal history, personal responsibility, substance use disorder

SS-02

## EXPLORING CRIMINAL LIABILITY AMONG PATIENTS ADMITTED TO A HIGH-SECURITY FORENSIC PSYCHIATRY SERVICE OF ELAZIG FETHI SEKIN CITY HOSPITAL FOR PSYCHIATRIC OBSERVATION AND ITS ASSOCIATIONS WITH CLINICAL VARIABLES

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**BACKGROUND AND AIM:** The Turkish Penal Code (TPC) prescribes that those with a mental disorder that prevents them from perceiving the legal meaning and consequences of the act or significantly affects their ability to direct their behavior related to the act cannot be penalized. High, medium, or low-security forensic psychiatry services are considered specialized centers where forensic psychiatric cases are admitted for both treatment and observation purposes and are safe for both patients and society. Besides, the overall characteristics of forensic cases are also affected by diverse variables. Therefore, we aimed to explore whether those admitted to the High-Security Forensic Psychiatry Service of Elazığ Fethi Sekin City Hospital (HSFP) for psychiatric observation had criminal liability after released from observation, as well as its association with some demographic and clinical variables.

**METHODS:** A local ethics committee granted ethical approval (2021/13-21 dated 12.16.2021) to our study. We retrospectively investigated the medical records of 401 patients who were admitted to the HSFP between 11.01.2020 and 11.01.2021 for observation hospitalization/outpatient follow-up and met the study criteria. The patients were divided into three groups: fully criminal, partially criminal, and non-criminal. Then, we sought the associations between criminal liability and clinical variables.

**RESULTS:** The findings revealed that 254 (63.3%) of the cases had criminal liability, while 109 (27.2%) were subject to TPC 32/1, and 38 (9.5%) were subject to TPC 32/2. We found the distribution of the criminal acts as follows: actual bodily harm (22.9%), sexual insult (8.2%), theft (7%), other (damage to property, slander, threats, looting) (20.2%), and multiple acts (32.7%). According to The Diagnostic and Statistical Manual of Mental Disorders (DSM-5), 27.9% of the cases subject to TPC 32/1-2 were with bipolar disorder, 20.4% with nos-psychotic disorder, 10.9% with borderline mental capacity, and 10.9% with mild mental retardation, 8.8% with delusional disorder, and 6.8% with schizophrenia.

**CONCLUSIONS:** The facts that the cases mostly had diagnoses within "psychotic disorders" and low educational and income level and lived in rural areas, were single and unemployed, and received active psychiatric treatment reinforce the relationship between high crime and low socioeconomic level and prevalent psychiatric diagnosis.

**Keywords:** Criminal liability, crime, observation, high-security forensic psychiatry service

## EVALUATION OF CRIMINAL RESPONSIBILITY IN CASES WHO APPLIED TO MERSIN UNIVERSITY MEDICAL FACULTY HOSPITAL PSYCHIATRY DEPARTMENT

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**BACKGROUND AND AIM:** Most people with psychopathology do not have behaviors that would qualify as criminal. However, it is stated in studies that some of the people who commit crimes have a higher risk of committing some types of crime due to the nature of the disease. In the present study, it was aimed to investigate the role of socio-demographic, psychopathological, and criminological features in forensic psychiatric decisions and to mention criminal responsibility and social danger in criminal proceedings through the archive files containing the psychiatric examination information of the forensic cases who applied to the Mersin University, Department of Psychiatry.

**METHODS:** 1023 archive files of forensic cases who applied between November 2014-November 2019 were evaluated retrospectively. All files are scanned; classification was made according to the reasons for requesting forensic psychiatric examination. With the information obtained by scanning the 177 files that were asked to be evaluated for criminal responsibility from these groups; parameters such as patients' sociodemographic information, nature of the crime, psychiatric illness, the status of substance use, history of previous psychiatric treatment, hospitalizations, forensic history, and their interrelationships were examined. Ethics committee approval was obtained from Mersin University Clinical Research Ethics Committee with the date of 08/11/2019 and number 1221544. Research data were evaluated by SPSS for Windows 15.0.

**RESULTS:** It was observed that the majority of the cases evaluated in our study were young, male, single and, low education level, and the psychiatric diagnoses of the cases were mostly mild mental retardation, normal mental examination, and schizophrenia. The frequency order of the crimes subject to the decision; theft, deliberate injury, insult, sexual assault, 43.5% had a previous forensic history and 28.2% had a previous prison history. In the decisions made after the evaluation; 39.5% did not have criminal responsibility, 26% had full criminal responsibility, 16.4% could not decide, 14.7% did not have full criminal responsibility, 3.4% should be referred to the high-security forensic psychiatry unit and it has been concluded that 9% of them should also take security measures. The rates of forensic history before crime are higher in patients with Antisocial Personality Disorder than other diagnoses; It has been determined that the crime of desertion from military service is mostly among secondary school graduates, the crime of sexual abuse of the child is 4 mostly among primary school graduates, the crime of insult is mostly among high school graduates, and the crime of theft is least among university graduates. It was observed that the presence of forensic history was higher in Antisocial Personality Disorder, Substance Use Disorder, and Schizophrenia, and the number of hospitalizations was the highest in Schizoaffective Disorder, Psychotic Disorder-Not Otherwise Specified-, Schizophrenia groups. It was found that the repetitive delinquency behavior was higher in the group with substance use disorder.

**CONCLUSIONS:** Considering that the relationship between crime and psychopathologies is multifactorial, it was thought that it would be very useful to conduct comparative studies with larger sample groups, including personality traits and disorders. Such studies will make significant contributions to forensic psychiatry, improving the treatment compliance of patients.

**Keywords:** Crime, Criminal responsibility, Forensic psychiatry

## PREDICTORS OF TIME TO RELAPSE FOLLOWING INPATIENT TREATMENT FOR ALCOHOL USE DISORDER

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**BACKGROUND AND AIM:** Alcohol use disorder (AUD) is a chronic health problem that progresses with relapse and remission. Previous studies have reported that more than 60% of the patients treated for AUD would eventually relapse, most occurring in the early stages of treatment. The aim of this study is to estimate mean time-to-relapse and to examine baseline factors that predicted the timing of the relapse in patients with AUD following inpatient treatment.

**METHODS:** In this retrospective study, we included forty-seven patients with AUD who completed an inpatient detoxification treatment program and followed up for at least 12 months or until relapse occurred. Addiction Profile Index (API) and API-Clinical Form (API-C) were filled out during the first days of hospitalization. API is an easy-to-apply scale that evaluates different dimensions of addiction in people with AUD or substance use disorders, consisting of 37 items and five subscales including substance use intensity, addiction diagnostic criteria, the impact of substance use on life, craving, and motivation to quit substance use. API-C was developed in order to evaluate mental health problems in clinical practice in addition to the domains covered in API and consists of 21 items and six subscales, including anger management problems, lack of assertiveness, novelty-seeking behavior, impulsive behavior, risk of developing depression, and risk of developing anxiety disorders. Sociodemographic and clinical characteristics at baseline were also recorded. The presence and the timing of the relapse were acquired from outpatient psychiatric interviews. Cox proportional hazard models were used to determine factors related to the time to relapse after inpatient treatment. First, univariable Cox proportional hazard models were conducted with sociodemographic variables as well as API and API-C subscales. Then, multivariable Cox proportional hazard models were examined with the selected predictors from univariable models ( $p < 0.1$ ). Kaplan-Meier analysis was used to estimate the probability of time to relapse. The study was approved by the ethical committee of Hasan Kalyoncu University (Reference number: 2019/70; Date:21/10/2019).

**RESULTS:** Thirty-one patients (65.9%) relapsed during the follow-up period. In the univariable analyses, alcohol use intensity (Hazard Ratio [HR] = 1.44;  $p = 0.012$ ), anger management problems (HR = 2.28;  $p = 0.023$ ) and impulsive behaviors (HR = 2.25;  $p = 0.022$ ) were significant predictors of time-to-relapse. Depression risk was also included in the multivariable analysis ( $p = 0.073$ ). In the multivariable analysis, only alcohol use intensity (HR = 1.37;  $P = 0.036$ ) emerged as a significant predictor of relapse timing. According to the Kaplan Meier analysis, the estimated mean time-to-relapse time was 248.47 ± 39.52 days.

**CONCLUSIONS:** Our findings supported that majority of the relapse occurred early in the disorder course. We also found that the factors related to alcohol consumption and patients' personality can affect time-to-relapse. Future studies examining the interplay between these factors are needed.

**Keywords:** alcohol use disorder, relapse, Cox proportional hazard model, predictors, survival, time-to-relapse

## COMPARISON OF REMISSION PERIODS AND SOME DEMOGRAPHIC CHARACTERISTICS OF PATIENTS APPLYING TO THE ALCOHOL AND SUBSTANCE ADDICTION POLYCLINIC AND THE PROBATION UNIT

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**BACKGROUND AND AIM:** Our study aimed to retrospectively compare remission periods and some demographic data of outpatients applying to Bursa Training and Research Hospital, Alcohol and Drug Addiction Treatment Center (ASATC), and those applying to the Probation Unit after deciding for probation.

**METHODS:** Data in our study were obtained by retrospectively examining hospital records of those applying to probation and ASATC polyclinics throughout 2021. According to DSM-5, the absence of substance use for at least three months was considered early remission. Throughout 2021, 2957 individuals applied to Probation and 2650 individuals to ASATC polyclinics. Statistical analyzes were evaluated using the SPSS 26.0 program. The ethical approval was obtained from Bursa High-Education Training and Research Hospital with the number 2011- KAEK-25 2022/03/04.

**RESULTS:** The mean age of the probation cases evaluated in the study was  $30.92 \pm 8.91$  years, whereas the mean age of the outpatients was  $33.76 \pm 10.86$ . The mean age of the probation cases was found to be statistically significantly lower ( $t = -9.24$ ,  $p < 0.001$ ). 99 (5.4%) of the probation cases and 211 (8.0%) of the outpatients were women, and the female sex ratio was statistically significantly lower in the probation cases ( $X^2 = 11.66$ ,  $p = 0.001$ ). Considering Chi-Square Analysis, the educational status rates between the two groups were evaluated to differ statistically significantly ( $X^2 = 11.29$ ,  $p = 0.004$ ), and the rate of living in the city where ASATC provides treatment for outpatients was statistically significantly higher than the rates of probation cases ( $X^2 = 80.90$ ,  $p < 0.001$ ). 900 (49.1%) of the probation cases and 599 (22.8%) of the outpatient cases were in remission, and rates of remission were statistically significantly higher in the probation cases considering the Chi-Square Analysis ( $X^2 = 377.77$ ,  $p < 0.001$ ). Moreover, the remission periods were found to differ statistically significantly between the two groups ( $X^2 = 28.08$ ,  $p < 0.001$ ).

In Multivariate Binary Logistic Regression Analysis, the probability of failure in treatment in outpatients was 3.56 times higher (CI: 3.12-4.06;  $p < 0.001$ ), besides, those with undergraduate or higher education were 1.24 times more likely to fail, comparing primary school graduates (CI: 1.06-1.45;  $p = 0.006$ ). In this model, age, gender, and the home-city did not statistically significantly increase the risk of treatment failure.

**CONCLUSIONS:** Considering our results, remission rates were detected to be significantly lower in groups with high education levels. As the level of education increases in the population, the prevalence of substance use decreases. Only the population with substance use was, however, included in this study individuals with a high level of education were thought to might insist on continuing their substance use. Remission rates of probation cases were statistically significantly higher than outpatients. This may be due to the power of legal sanction and the efforts of patients not to use the substance for toxicology analysis. The fact that ASATC is the single-center for outpatients, unqualified health personnel, and lack of specialists may increase treatment failure.

**Keywords:** probation, substance use, addiction, remission

## RETROSPECTIVE REVIEW OF CLINICAL AND SOCIODEMOGRAPHIC CHARACTERISTICS OF METHAMPHETAMINE-INDUCED PSYCHOSIS IN THE INPATIENT UNIT FOR MEN

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**BACKGROUND AND AIM:** According to the Turkey Drug Report 2021; Methamphetamine has become one of the most used substances in recent years. When used in high dose or repeatedly, this stimulant can cause drug-induced psychosis that displays symptoms similar to those of paranoid schizophrenia, which is characterized by hallucinations, delusions and thought disorders. Clinicians have difficulty in distinguishing methamphetamine-induced psychosis (MİP) from schizophrenia and non-substance-using psychosis (NSUP) in emergency and inpatient services. The study was aimed to investigate sociodemographic and clinical characteristics of individuals with MİP and NSUP in a tertiary hospital.

**METHODS:** We reviewed hospital medical records for the last 3 months in a mental health hospital inpatient unit for men, retrospectively. During the period between 01.09.2021 to 01.12.2021, 50 patients with F19.5 Mental and behavioral disorders due to multiple drug use and use of other psychoactive substances, F28 Other nonorganic psychotic disorders, F29 Unspecified nonorganic psychosis according to International Classification of Diseases-10 (ICD-10) were hospitalized. Eight of the patients were excluded because non-methamphetamine substances were detected (cannabis, synthetic cannabinoid, other). Based on urinalysis and anamnesis, 42 patients were divided into two groups as methamphetamine users psychosis (MIP  $n = 13$ ) and never drug users psychosis (NSUP  $n = 29$ ). Sociodemographic and clinical data were evaluated. The study was approved by the local ethics committee (21.02.2022/8).

**RESULTS:** All of the patients ( $n = 42$ ) were male. MIP the mean years of age was  $30.6 \pm 6.9$  and NSUP was  $37.6 \pm 17.5$ , and there was no significant difference ( $p = 0.513$ ). There was a significant difference between the two groups in terms of suicide history (MIP 13.8%; NSUP 7.7%  $\chi^2 = 22.122$ ,  $p = 0.04$ ). There was no significant difference between the two groups in terms of duration of psychiatric illness ( $p = 0.132$ ), length of hospital stay ( $p = 0.331$ ), co-occurring psychiatric diagnosis ( $p = 0.67$ ), co-occurring personality disorder diagnosis ( $p = 0.328$ ), and discharge treatment (antipsychotic and/or antidepressant) ( $p = 0.195$ ). In terms of clinical symptoms, there was no significant difference between the two groups in terms of auditory, visual hallucination and persecutory, mystical, jealous, reference, paranoid, nihilistic delusions ( $p > 0.005$ ).

**CONCLUSIONS:** Follow-up studies showed that a quarter of patients with methamphetamine psychosis were diagnosed with schizophrenia within five years of their first hospitalization. There were lack of epicrisis data in our study. On the other hand it is difficult to distinguish MIP patients from NSUP patients in terms of psychotic symptoms. In our study, the fact that there was no difference other than suicide in the patient groups in terms of sociodemographic and clinical characteristics can be interpreted MIP patients did not differ significantly from NSUP patients in terms of clinical appearance during hospitalization. Patients with transient symptoms, the development of chronic or recurrent psychosis should be followed up, possible pharmacological management and behavioral treatment of acute symptoms, psychoeducation for methamphetamine use, and its relationship with psychosis should be closely monitored.

**Keywords:** methamphetamine, psychosis, non-substance-using

## SUICIDE RISK AND AFFECTIVE TEMPERAMENT CHARACTERISTICS IN PATIENTS WITH OPIOID USE DISORDER

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**BACKGROUND AND AIM:** Although substance use disorder is an independent risk factor for suicide; factors such as previous suicide attempts, depressive symptoms, and impulsivity are also found to be associated with suicide. Considering the function of suicide attempt to cope with negative emotions, it can be thought that affective temperament characteristics may have a role in suicidal behavior in this patient group. This study aimed to investigate affective temperament characteristics, depression and craving in patients with opioid use disorder (OUD) with or without suicidal attempt. The effects of these variables on suicide probability are also investigated.

**METHODS:** The study included 216 patients diagnosed with OUD according to DSM-5 criteria and currently under opioid agonistic treatment with buprenorphine/naloxone. Beck Depression Inventory (BDI), Substance Craving Scale (SCS), Temperament Evaluation of Memphis, Pisa, Paris and San Diego-Autoquestionnaire (TEMPS-A) and Suicide Probability Scale (SPS) were applied to participants. We compared 33 OUD patients who had attempted suicide (OUD-S+) with 183 OUD patients who had not attempted suicide (OUD-S-). Additionally multiple linear regression analysis was used to determine the predictors of suicide probability. Informed consent was obtained from all participants. The study was conducted through the approval of Bakirkoy Dr. Sadi Konuk Training & Research Hospital Ethics Committee with number 2021/532 on 15.11.2021.

**RESULTS:** OUD-S+ group showed significantly higher scores on cyclothymic ( $p=0.002$ ), depressive ( $p=0.007$ ), irritable ( $p=0.001$ ) and anxious ( $p<0.00$ ) subscales of TEMPS-A. OUD-S+ group also reported higher depression (BDI,  $p<0.001$ ), craving (SCS,  $p<0.001$ ) and suicide probability (SPS,  $p=0.004$ ) scores than OUD-S- group. Hyperthymic temperament did not show any significant differences between groups ( $p=0.5$ ). In the regression analysis model in which SPS total scores were included as the predicted variable; the model that consists of BDI, SCS and subscales of TEMPS-A as independent variables, explained 44.7% of the total variance ( $p<0.001$ ). Suicide Probability was positively predicted by depression ( $p<0.001$ ), depressive ( $p=0.005$ ) and irritable ( $p=0.004$ ) temperament and negatively predicted by hyperthymic temperament ( $p=0.001$ ).

**CONCLUSIONS:** The findings of our study show that suicidal behaviors are predicted not only by affective symptoms, but also by some temperamental characteristics. Affective temperaments should be taken into account in the assessment of suicide risk for all patients with OUD, not just those with suicide attempts.

**Keywords:** temperament, opioid use disorder, suicide

## PREDICTORS OF NICOTINE DEPENDENCE IN A SAMPLE OF PATIENTS WITH CHRONIC PAIN WHO CONSUME CIGARETTES: PRELIMINARY RESULTS OF THE CROSS-SECTIONAL STUDY

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**BACKGROUND AND AIM:** Pain is an unpleasant sensory or emotional experience related to the individual's past experiences, originating from any part of the body. Actual or potential tissue damage may accompany the pain. Chronic pain is a condition that persists despite the passing of the acute pathological condition or is associated with chronic tissue pathology. This period is specified as 3-6 months.

The rate of nicotine addiction among people with chronic pain is higher than the general population. Smoking can reduce chronic pain by reducing emotional stress and distracting attention from painful stimuli as a coping strategy. Evidence support that smokers have a higher incidence of chronic pain and report higher pain intensity scores. Smokers have a higher pain intensity and need more analgesics, and that pain affects their lives more negatively than non-smokers.

In this study, we aimed to investigate the relationship between pain severity and smoking status (severity of smoking addiction, duration of smoking addiction) and the role of distress intolerance and anxiety sensitivity in this relationship in chronic pain patients who currently smoke.

**METHODS:** We recruited the patients with chronic pain who admitted to Eskişehir Osmangazi University Algology Unit between 01.03.2021 and 30.09.2021. Inclusion criteria were having chronic pain for at least three months or more, volunteering to participate in the study, being 18 years old or older, being literate enough to fill out the forms alone, smoke at least one cigarette a day. We utilized sociodemographic information form, Hospital Anxiety Depression Scale- Anxiety Subscale, Distress Intolerance Scale (DIS), Anxiety Sensitivity Index (ASI), Fagerström Nicotine Dependence Test (FNDT), and visual analog scale as data collection tools. The local Ethics Committee approved our study (30.03.2021 number: 29).

**RESULTS:** A total of 58 patients participated in the present study. 65.5% of the sample was female ( $n=38$ ). High school graduates were 27.6% of the participants ( $n=16$ ), while university graduates were 19.0% ( $n=11$ ). The mean age of the group was  $49.10 \pm 12.26$ . The duration of smoking median value was 22 (15.00- 30.00) years. The median value of years with chronic pain was 5.00 (2.75- 10.00). Amount of consumed daily cigarettes was less than 10 among 51.7% ( $n=30$ ), 10-20 cigarettes for 41.4% ( $n=24$ ).

FTND scores were correlated to the severity of perceived pain ( $r=0.286$   $p=0.030$ ), DIS ( $r=-0.304$   $p=0.020$ ), and anxiety ( $r=0.268$   $p=0.042$ ). Multivariate binary logistic regression analyses demonstrated following variables predict moderate or high nicotine dependence: anxiety (Odds=1.140 (1.016-1.278)  $p=0.025$ ), severity of perceived pain (Odds=1.569 (1.140-2.158)  $p=0.006$ ), DIS (Odds=0.942 (0.899-0.987)  $p=0.012$ ), and ADI (Odds=1.057 (1.015-1.100)  $p=0.007$ ).

**CONCLUSIONS:** The severity of smoking is related to higher anxiety scores, anxiety sensitivity, and distress intolerance in patients with chronic pain. Therefore, interventions targeting anxiety, anxiety sensitivity, distress intolerance, and effective pain treatment may benefit patients with chronic pain overcome nicotine dependence.

**Keywords:** Nicotine, Smoking, Dependence, Chronic Pain, Anxiety

## THE RELATIONSHIP BETWEEN THE DURATION OF ACADEMIC YEARS AND SMARTPHONE ADDICTION IN UNIVERSITY STUDENTS

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**BACKGROUND AND AIM:** It is known that smartphone addiction can have negative effects on biological, psychological, and social functionality, especially in young users, due to various usage patterns. Although smartphones reduce the feeling of loneliness in individuals due to their advantage of being constantly connected to the Internet, this situation could become a behavioral addiction and cause deterioration in interpersonal relationships and social isolation. Although some aspects of this subject were investigated, to our knowledge, there is no study in the literature comparing its relationship with the duration of academic years. The aim of this study was to investigate the relationship between the duration of academic years and smartphone use in undergraduate university students.

**METHODS:** The sample of the study consists of 1217 students currently studying in the undergraduate program. 535 of the students were in the first half, and 682 of them were in the second half of their education. The cross-sectional data were collected using self-reported questionnaires which include the Sociodemographic Data Form and the Short Version of the Smartphone Addiction Scale (SAS-SV) that applied to the volunteer participants who met the inclusion criteria of the study. Informed consents were obtained from the volunteers who agreed to participate in the study. The participants were divided into two groups in the first half and the last half of their education, and appropriate statistical analyses were applied. Permission for the study was obtained from the Ethics Committee of Haydarpaşa Numune Training and Research Hospital (IRB:2018/175).

**RESULTS:** When the sociodemographic data of the participants that included variables such as age, gender, height, weight, body mass index (BMI), and the duration of academic years, were compared between the two groups, a statistically significant difference was found ( $p < 0.05$ ). In addition, a statistically significant difference was found between the SAS-SV scores between the two groups ( $p < 0.001$ ).

**CONCLUSIONS:** In our study, it has been shown that the use of smartphones is higher in university students in the early years of their education. Due to the fact that smartphones have so many different functions, there are many reasons such as adaptation problems to the new environment, compensation for social deprivation, completing the deficiencies of their new lifestyle. Further studies are needed to explain the underlying causes of this relationship and reduce smartphone addiction.

**Keywords:** academic year, addiction, smartphone, students, university

## THE EFFECT OF GAME TYPES AND GAMING FEATURES ON THE SEVERITY OF INTERNET GAMING DISORDER

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**BACKGROUND AND AIM:** Although Internet gaming disorder (IGD) has been studied, minimal research has been conducted concerning the influence of different game genres on IGD. The purpose of this study is to compare the effect of game genre on IGD symptomatology and to determine factors related to IGD status in an adolescent outpatient population.

**METHODS:** Adolescents aged 11-18 years who applied to the child psychiatry department with the complaint of playing games and clinical controls were included in the study. Participants ( $n = 152$ ) who usually played one of these games were interviewed with Kiddie-Sads Present and Lifetime Version (K-SADS-PL) for psychopathological assessment and were collected sociodemographic, game genre and usage pattern data. Internet games such as strategy games, first-person shooter (FPS) games were categorized into eleven genres. Multiple regression analysis was performed to evaluate the effects of variables such as psychiatric comorbidity, gaming pattern and game genre on the severity of IGD. All participants and parents provided written informed consent.

This study was approved by the Institutional Review Board of Bakirkoy Dr. Sadi Konuk Training and Research Hospital (IRB number: 2020/447)

**RESULTS:** The sample consisted of 96 IGD and 56 clinical controls, with a mean age of 14.02 years. Presence of Attention Deficit Hyperactivity Disorder (ADHD) ( $p < 0.001$ ) and Social Anxiety Disorder (SAD) ( $p = 0.03$ ) predicted the severity of IGD (Adjusted  $R^2 = 0.09$ ,  $p < 0.001$ ). Age ( $p = 0.03$ ), the change in the school grade ( $p < 0.001$ ) and the age of starting the game ( $p < 0.001$ ) were the predictors of the severity of IGD (Adjusted  $R^2 = 0.32$ ,  $p < 0.001$ ). Puzzle ( $p = 0.03$ ), simulation ( $p = 0.04$ ) and survival ( $p = 0.03$ ) game types predicted IGD severity (Adjusted  $R^2 = 0.12$ ,  $p = 0.001$ ). Gaming on a computer, phone, tablet or console did not have a significant effect on the severity of IGD. Weekly play time ( $p = 0.63$ ), weekday play time ( $p = 0.18$ ), weekend play time ( $p = 0.44$ ) did not have a significant effect on IGD severity, while the number of days without playing in the last week ( $p < 0.001$ ) predicted IGD severity (Adjusted  $R^2 = 0.53$ ,  $p < 0.001$ ).

**CONCLUSIONS:** The findings of this study indicate that IGD is a stable psychiatric diagnosis comprising users of a wide range of game genres. In addition, certain types of play and certain psychiatric comorbidities have a significant effect on IGD severity. Detailed examination of these features while evaluating patients may reduce the long-term burden of disease.

**Keywords:** internet gaming disorder, adolescent, game genre, gaming features

## CLINICAL PRESENTATIONS OF FEMALE HYPERSEXUALITY ON A PSYCHIATRY OUTPATIENT CLINIC IN TURKEY: A RETROSPECTIVE ANALYSIS OF PATIENTS IN THE CONCEPT OF DIAGNOSIS AND TRAUMA

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**BACKGROUND AND AIM:** Hypersexual behavior is a concept that has not been clarified yet. In 2010, Kafka proposed diagnostic criteria for "hypersexual disorder" to include it in the DSM-5 as "the presence of recurrent and intense sexual fantasies, sexual urges, or sexual behaviors over a period of at least six months". Among many etiological factors for hypersexuality, trauma is one of the critical aspects. There are cumulative pieces of evidence that childhood sexual abuse can play a significant role in hypersexuality cases. In this study, it was aimed to retrospectively analyze female patients with hypersexuality in terms of sociodemographic and clinical variables, as well as diagnosis and treatment complexities in management.

**METHODS:** This study was conducted in Gazi University, Department of Psychiatry. With a retrospective design, records of individuals who were admitted to the outpatient clinic were examined. Between January 1, 2020, and December 31, 2020, a total of 4028 patients constituted the study sample. The records of the patients were screened, and patients with a history of hypersexuality were obtained (n=39). The diagnostic criteria of "Hypersexual Disorder" were determined according to the proposed criteria developed by Kafka in 2010. 21 patients met the criteria of "hypersexuality disorder". A database consisting of sociodemographic characteristics, clinical data, and trauma and hypersexuality-related variables which were determined by researchers was formed. The study received ethics approval from the Gazi University Ethics Committee (Research Code No: 2021-11).

**RESULTS:** The mean age of the patients was 36.1. The most common previous diagnosis was bipolar affective disorder (BAD) (71.4%). Only one patient had previously been diagnosed with post-traumatic stress disorder (PTSD). After being followed up in our clinic, 14.3% of the patients were diagnosed with BAD, 81.3% were borderline personality disorder (BPD), 57.1% were PTSD. The majority of the patients (90.5%) had experienced serious traumatic events. The trauma types or adverse life events were rape (42.9%), recurrent sexual abuse without rape in adulthood (28.6%), sexual abuse without rape in childhood (14.3%), incestuous abuse (14.3%), physical abuse (33.3%), domestic violence (38.1%), and other traumas or adverse life events that cannot be classified (33.3%). Some patients had experienced more than one category of traumatic or adverse life events. Previously, %90.5 of the patients were prescribed at least one antidepressant, %81.00 at least one antipsychotic, 66.7% at least one mood stabilizer.

**CONCLUSIONS:** To the best of our knowledge, this is the first study to examine female hypersexuality and its relationship with PTSD in Turkey. While there was a BAD predominance in the previous diagnoses, a transition trend towards BPD and PTSD is observed during the follow-up of the patients. There was also an observation that the required medication doses have been decreased, and some patients completed a successful long-term psychotherapy program. The majority of these patients had followed up as BAD before. This causes extremely long delays in getting appropriate treatment, and unnecessary treatments with side effects. As a result, history of trauma must be questioned when observing signs of hypersexuality in a patient, before making a definite diagnosis.

**Keywords:** bipolar affective disorder, borderline personality disorder, complex post-traumatic stress disorder, hypersexuality, trauma

## THE RELATIONSHIP BETWEEN FEAR AND ANXIETY OF COVID-19 AND LEVELS OF DEPRESSION, ANXIETY, AND STRESS

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**BACKGROUND AND AIM:** The novel coronavirus disease 2019 (COVID-19) pandemic continues globally. Early in the pandemic, COVID-19 was believed to be a short-term course of acute infectious illness in adults lasting approximately two weeks. However, emerging data has revealed that COVID-19 patients may have long-term symptoms lasting from a few weeks to months. In particular, these long-term symptoms also include depression, anxiety, and stress. The first purpose of this study was to compare the fear and anxiety of COVID-19 and depression, anxiety, and stress levels between patients with a history of COVID-19 in the last six months and the control group without a history of COVID-19 and secondly was to investigate the relationship between fear and anxiety of COVID-19 and levels of depression, anxiety, and stress.

**METHODS:** The study was a cross-sectional online survey among patients of COVID-19 who had in the last six months and healthy volunteers without a history of COVID-19. Sociodemographic data form, Fear of COVID-19 Scale (FCS), COVID-19 Anxiety Scale (CAS), and Depression-Anxiety-Stress-21 (DASS-21) were applied to all participants. Statistical analyses were performed using IBM SPSS-24. We conducted Chi-square, Mann-Whitney-U, and Student-t analyses to compare sociodemographic data and scale scores. Spearman correlation analysis was used for inter-scale correlation analysis. This study was approved by both the Turkish Ministry of Health, General Directorate of Health Services (2022-01-04T22\_34\_22), and the Clinical Research Ethics Committee of Gaziantep Islam Science and Technology University (2022/83).

**RESULTS:** One hundred and ninety-six patients with a history of COVID-19 (female 63.3%; age = 35.68 ± 9.35) and one hundred and ninety-four healthy volunteers without a history of COVID-19 (female 68.6%; age = 36.95 ± 8.72) participated in our study. The groups were similar in age, gender, education, and marital status (p > 0.05). CAS, FCS, total, and subscales DASS-21 scores were higher in the COVID-19 history group than in without a history of COVID-19. DASS-21 (p = 0.041), anxiety subscale (p < 0.01), and CAS (p < 0.01) scores were significantly higher in the group with a history of COVID-19 than in the group without a history of COVID-19. In correlation analysis, we found there was a positive correlation between CAS (r = .403) with DASS-21 and FCS (r = .428) with DASS-21 (for each p < 0.01) in the group without a history of COVID-19. On the other hand, there was also a stronger positive correlation between CAS (r = .609) with DASS-21 and FCS (r = .626) with DASS-21 (for each p < 0.01) in the COVID-19 history group.

**CONCLUSIONS:** We found that patients with a history of COVID-19 have more anxiety about COVID-19 and have higher depression, anxiety, and stress levels. In line with the literature, these findings showed that COVID-19 is not just a contagious disease, but has many probable negative mental consequences. Therefore, clinicians should be aware of the mental health outputs of COVID-19.

**Keywords:** Anxiety, COVID-19, depression, fear, stress

## ASSESSMENT OF CYBERCHONDRIA LEVELS AMONG PATIENTS DIAGNOSED WITH ANXIETY DISORDERS IN A TERTIARY CENTER

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**BACKGROUND AND AIM:** Cyberchondria is a term used for excessive internet research to gain knowledge in the field of health. In Turkey, there is no study investigating cyberchondria in patients with anxiety disorders (AD). Hence, we aimed to determine the level of cyberchondria and investigate a possible relationship between cyberchondria levels and general anxiety levels, health anxiety levels of the patients with AD. Our secondary aim was to assess the effects of cyberchondria and health anxiety scores on the quality of life of patients with AD.

**METHODS:** Ethics Committee approval was received on June 2018 with the registration number 18-6.1/28. Patients who applied to the AD Outpatient Clinic of a university hospital were evaluated voluntarily by the researcher after their informed consent was obtained. A case report form questioning patients' sociodemographic data, psychiatric disease histories and cyberchondria-related findings was filled in and the "Hamilton Anxiety Rating Scale" (HARS) was applied during the psychiatric interview. Thereafter, the subjects were required to answer "Cyberchondria Severity Scale" (CSS), "Anxiety Sensitivity Index 3" (ASI-3), "Health Anxiety Inventory Short Version" (HAI), "Adult Separation Anxiety Questionnaire" (ASA) and "Short Form 36" (SF-36). IBM SPSS 24 was used for the analysis of the data and the statistical significance threshold value was determined as  $p < 0.05$  in this cross-sectional study.

**RESULTS:** A total of 61 cases followed up with the diagnosis of any AD ( $n=37$ ) or obsessive-compulsive disorder ( $n=24$ ) were included in the study. Among them, 60.7% were female ( $n=37$ ), 45.9% were high school graduates ( $n=28$ ), 42.6% were actively working ( $n=26$ ), 55.7% ( $n=34$ ) were married and the mean age of the sample was  $38.06 \pm 14.13$  (min 18, max 70). While the mean time spent by the subjects on the internet during a day was  $183 \pm 167$  minutes, the most visited websites were social media (70.9%), and health-related websites (23.4%). 80.3% of the sample had searched for any disease on the internet so far, the most researched diseases were AD (34.5%), and heart diseases (11.2%). 70.5% of the participants felt relief after their research. Two-thirds of the sample searched about mental illness, and one-third of those felt relief after the research. Almost none of them took actions such as changing treatment or discontinuing medication after their research. The mean CSS score of the sample was  $75.95 \pm 24.99$  (min 33, max 152) and it was found that there was no significant difference regarding age and gender. CSS scores were correlated with HAI ( $r=0.482$ ,  $p < 0.001$ ), HARS ( $r=0.361$ ,  $p=0.005$ ), ASI-3 ( $r=0.320$ ,  $p=0.014$ ), and SF-36 social function subscale ( $r=-0.276$ ,  $p=0.036$ ). There was no statistically significant relationship between CSS and other SF-36 subscale scores as well as ASA scores.

**CONCLUSIONS:** The finding that cyberchondria levels were positively correlated with anxiety levels, and especially health anxiety levels is in line with the results of other studies in this field. Considering the rapidly progressing digitalization and the significant increase in internet use, more research is needed that can shed light on the development of appropriate interventions by examining the concept of cyberchondria and its relationship with AD and other mental disorders.

**Keywords:** Anxiety, Anxiety Sensitivity, Cyberchondria, Health Anxiety, Internet Usage, Quality of Life

## PSYCHOTIC-LIKE EXPERIENCES IN OBSESSIVE COMPULSIVE DISORDER: MEDIATING ROLE OF THE LEVEL OF INSIGHT

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**BACKGROUND AND AIM:** The aim of this study is to compare individuals diagnosed with Obsessive Compulsive Disorder (OCD) and healthy individuals in terms of psychotic-like experiences (PLEs), to investigate the relationship between PLEs and OCD severity, level of insight, childhood traumas (CT), and the factors affecting the relationship between OCD and PLEs.

**METHODS:** 83 patients diagnosed with OCD according to DSM 5 and 83 healthy individuals participated in the study. Sociodemographic information form (SDIF), Yale-Brown Obsessive Compulsive Scale (YBOCS), Community Assessment of Psychic Experiences (CAPE), Childhood Trauma Questionnaire (CTQ), Hamilton Depression Rating Scale (HAM-D) and Hamilton Anxiety Rating Scale (HAM-A) were applied to the OCD group. SDIF, CAPE and CTQ were applied to the healthy control group. The positive dimension of CAPE (CAPE-P) was used for the assessment of PLEs. The 11th item of YBOCS (YBOCS-11) was used to evaluate the level of insight. OCD and healthy control groups were compared in terms of sociodemographic informations and the scores of CAPE and CTQ. In the OCD group, correlation analyzes were performed between the scores of YBOCS, CTQ, CAPE, HAM-D and HAM-A. In the OCD group, stepwise multiple linear regression analysis was performed to predict the variation of the scores of CAPE-P and, mediation and moderation analyzes were performed to evaluate the factors affecting the relationship between OCD severity and PLEs. The study was approved by the Ondokuz Mayıs University Faculty of Medicine Clinical Research Ethics Committee with the number 2021/101.

**RESULTS:** No difference was found between OCD and healthy control groups in terms of sociodemographic informations. The OCD group had higher scores than the healthy control group in all dimensions of CAPE ( $p < 0.001$ ) and in all subscales of CTQ ( $p=0.045$  for sexual abuse,  $p < 0.001$  for other subscales). The rate of those who reported at least one PLE was 89.2% in the OCD group and 24.1% in the healthy control group. A low-degree positive correlation was found between the score of CAPE-P and the scores of YBOCS ( $r=0.311$ ), YBOCS-11 ( $r=0.378$ ), HAM-D ( $r=0.320$ ), HAM-A ( $r=0.312$ ), emotional abuse ( $r=0.423$ ) and CTQ ( $r=0.320$ ). As a result of the stepwise multiple linear regression analysis, the scores of the YBOCS-11, HAM-D and CTQ significantly predicted the variation in the scores of CAPE-P ( $F=13.930$ ;  $R^2=0.346$ ;  $p < 0.001$ ). As a result of mediation and moderation analyzes, it was found that the relationship between OCD severity and PLEs was mediated poor insight ( $B=0.150$ ;  $\%95GA=0.043-0.312$ ), but the scores of depression ( $B=0.005$ ;  $\%95GA=-0.043-0.049$ ) and anxiety ( $B=0.070$ ;  $\%95GA=-0.047-0.249$ ) did not, and was not moderated by CT ( $B=-0.026$ ;  $p=0.815$ ).

**CONCLUSIONS:** The results of this study shows that OCD severity did not have a direct effect on its relationship with PLEs, and poor insight mediated the relationship. It was concluded that emotional abuse and the level of insight are important factors for PLEs in OCD. The fact that PLEs are more common in the OCD group, but also in healthy individuals, supports the concept of psychosis continuum. We emphasize that being aware of PLEs in OCD can provide new understandings about the phenomenon of OCD and psychosis, as well as the importance of the dimensional approach in psychiatry.

**Keywords:** childhood traumas, insight, obsessive compulsive disorder, psychotic-like experiences

## THE PLACE OF DEPRESSION AND CHILDHOOD TRAUMA IN PATIENTS WITH FIRST ATTACK AND RECURRENCE OF PANIC DISORDERS

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**BACKGROUND AND AIM:** Panic disorder (PD) is a common and debilitating neuropsychiatric disorder characterized by panic attacks coupled with excessive anxiety. PD is associated with decreased quality of life of those affected and increased health care costs. This research was conducted as a descriptive study to examine the relationship between depression and childhood trauma in patients with initial attacks and recurrence PD.

**METHODS:** The descriptive and cross-sectional type of research was conducted with 120 participants. Participants were divided into 3 groups as the first attack (n= 40), recurrent PD patient (n= 40) and control group (n= 40). The data were collected by Personal Information Form, Hamilton Depression Rating Scale (HDRS), Childhood Traumas Scale (CTS) and Panic Disorder Severity Scale (PDSS). We conducted the study following the principles of the Declaration of Helsinki. The relevant Institutional Ethics Committee approved study protocol (IRB no. 13.03.2020/2020-07). The informed consent form was distributed and obtained from all participants. One-Way ANOVA, Independent t-test, correlation analysis and regression tests were used in the evaluation of the data.

**RESULTS:** The total CTS score averages of the patients with the first attack ( $7.92 \pm 2.33$ ) and recurrent PD ( $8.82 \pm 2.14$ ) were significantly higher than the control group ( $5.75 \pm 0.98$ ) ( $F=27.19$ ,  $p=0.001$ ). A positively low level of correlation was determined between HDRS scores and CTS-emotional neglect sub-dimension ( $r=0.118$ ,  $p=0.040$ ). A positively low level of correlation was determined between PDSS and CTS total score, the sub-dimensions of CTS-emotional abuse, CTS-physical abuse ( $r=0.274$ ,  $p=0.014$ ,  $r=0.290$ ,  $p=0.009$ ,  $r=0.363$ ,  $p=0.001$ ) respectively.

**CONCLUSIONS:** It was found that the depressive symptoms of the first attack and regeneration PD patients increased as their childhood trauma experience increased. In addition, the presence of emotional and physical abuse in childhood increases the severity of panic disorder disease.

**Keywords:** panic disorder, depression, childhood trauma.

## ADULT SEPARATION ANXIETY DISORDER AS AN OVERLOOKED DIAGNOSIS

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**BACKGROUND AND AIM:** Separation anxiety disorder, which was previously considered a childhood-specific disorder, has been included in the group of disorders seen in adulthood in the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5). There are few studies on this subject in the literature. The aim of this study is to investigate the frequency of adult separation anxiety disorder diagnosis in individuals diagnosed with anxiety disorders and to evaluate comorbidity patterns in outpatient clinics.

**METHODS:** This study was conducted at Ataturk University Faculty of Medicine, Department of Mental Health and Diseases outpatient clinics. Patients who were diagnosed with anxiety disorders after being examined in the outpatient clinic between December 2020 and May 2021, were referred for the research. Patients who agreed to participate in the study and met the inclusion criteria were included in the study. The written informed consent form was obtained from all participants. These patients were re-examined and their diagnoses were evaluated for this study by the researcher according to the DSM-5 and Structured Clinical Interview for DSM-5 Diagnosis (SCID-5), and the frequency of diagnosis of adult separation anxiety disorder was investigated. The study was approved by the Ethics Committee of Ataturk University Faculty of Medicine on 01.10.2020 with the number B.30.2.ATA.0.01.00/443.

**RESULTS:** Since 10 patients refused to participate in the study, 166 of 176 patients with anxiety disorders who were referred from the outpatient clinics for the study were evaluated. Former diagnosis and their percentages were as: 35.5% (n=59) with generalized anxiety disorder (GAD), 26.5% (n=44) with unspecified anxiety disorder, 26.5% (n=44) with panic disorder, 8.4% (n=14) with social anxiety disorder, 3% (n=5) with specific phobia. After the study evaluation by the researcher according to SCID-5 and DSM-5, the diagnosis of 22.7% (n=10) with unspecified anxiety disorder and 5% (n=3) with GAD were changed to adult separation anxiety disorder. Additionally, adult separation anxiety disorder was found to accompany 26.1% (n=40) of patients with other anxiety disorders. Comorbid adult separation anxiety disorder was found in 42.9% (n=24) of those with GAD, 25% (n=11) of those with panic disorder, 11.8% (n=4) of those with unspecified anxiety disorder, and 7.1% (n=1) of those with social anxiety disorder. Psychiatric comorbidity was detected in 75.5% (n=40) of the 53 patients with adult separation anxiety disorder. These comorbid diagnosis were GAD (45.3% (n=24)), panic disorder (20.8% (n=11)), unspecified anxiety disorder (7.5% (n=4)), obsessive-compulsive disorder (3.8% (n=2)), social anxiety disorder (1.9% (n=1)) and attention deficit and hyperactivity disorder (1.9% (n=1)).

**CONCLUSIONS:** Our study showed that the diagnosis of adult separation anxiety disorder was missed in patients who were diagnosed with anxiety disorders during routine psychiatric examinations in the outpatient settings before they were evaluated for this study. In addition, it was found that patients with adult separation anxiety disorder had a high rate of comorbidity. These results are remarkable, as the underlying cause of inadequate response to psychiatric treatments may be the failure to diagnose this disorder.

**Keywords:** anxiety disorder, comorbidity, separation

## THE IMPACT OF THE COGNITIVE FLEXIBILITY ON THE COURSE OF OBSESSIVE-COMPULSIVE DISORDER IN COVID-19 PANDEMIC: PRELIMINARY FINDINGS

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**BACKGROUND AND AIM:** Coronavirus outbreak has been changed almost every aspect of life therefore adaptation to changing circumstances, coping strategies may be important for well-being. Cognitive flexibility refers to the ability to adjust cognition and behavior according to changing demands. The psychological impacts of the pandemic have been repeatedly reported by clinicians and researchers since it first started. Obsessive-compulsive disorder (OCD) has been attracted a particular concern since the fear of contamination of the coronavirus seen in many people during the pandemic and recommended precautions to prevent the Covid-19 spread like avoiding potential contaminants (such as not touching certain surfaces or decreasing social contacts) and handwashing overlap with OCD symptoms. Most of the patients have been observed worsening in OCD symptomatology after the pandemic, whereas some reported relief, especially in the early stages of the outbreak. Cognitive flexibility has also been shown to be an executive impairment in OCD so it may be one possible mechanism explaining the impact of the pandemic and environmental changes on the disorder. In this study, we aimed to explore the influence of cognitive flexibility on the course of OCD during the COVID-19 pandemic. We hypothesized that lower cognitive flexibility is related to worsening OCD symptomatology. The study was approved by the local Ethics Committee (approval number: 2021/154).

**METHODS:** The sample characteristics and the course of symptoms during pandemic was evaluated with a clinician-developed sociodemographic and clinical data form. Yale-Brown Obsession Compulsion scale (YBOCS) was applied to assess OCD symptoms. The Cognitive Flexibility Scale (CSF) was used to evaluate the cognitive flexibility. Fear Covid-19 scale, Hamilton anxiety scale and Hamilton depression scale were also used to assess comorbid distress. All interviews were conducted face to face.

**RESULTS:** Of 62 OCD patients, 21 (33.9%) reported no change, 40 (64.5%) reported an increase and one patient reported an improvement in symptoms. Increase levels were distributed mild (n=11, 17.7%) moderate (n=26, 41.9%), severe (n=3, 4.8%) in worsening group. There were no differences between groups (worsening/not worsening groups, mild/moderate/severe worsening groups) in terms of age, sex, fear of covid, cognitive flexibility levels. Higher worsening were associated with higher YBOC scores ( $r=0.344$ ,  $p=0.007$ ). A moderately negative significant correlation was found between HAM-A and CFS ( $r=-0.454$ ,  $p<0.001$ ).

**CONCLUSIONS:** Our study is in line with research showing that the majority of OCD patients reported worsening in symptomatology during the pandemic. Preliminary findings did not show an obvious impact of cognitive flexibility on worsening in OCD patients. However, including larger numbers of patients are needed for a better understanding of the determinants on the association between the pandemic and changes in OCD symptoms.

**Keywords:** obsessive compulsive disorder, COVID-19, Cognitive Flexibility

## ASSESSMENT OF DEPRESSION, ANXIETY, SLEEP QUALITY AND BIOLOGICAL RHYTHMS BETWEEN COVID-19 PATIENTS AND HEALTHY CONTROLS

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**BACKGROUND AND AIM:** It was aimed to explore depression, anxiety, sleep quality, biological rhythms, and risk factors related to taste and smell disorders in COVID-19 patients.

**METHODS:** A total of 247 individuals [123 patients with COVID-19 includes 60 hospitalized-treated groups (HTG) and 63 home-treated-group (HOG), 124 healthy controls (HC)] were included. Depression Anxiety Stress Scale Short Form (DASS-21), Biological Rhythms Interview of Assessment in Neuropsychiatry (BRIAN), Pittsburgh Sleep Quality Index (PSQI) were applied. Kafkas University Faculty of Medicine Ethics Committee approved the study (24/12/2020, 80576354-050-99/323).

**RESULTS:** In the patient group, DASS-21 and all its subscales, PSQI and BRIAN scores were higher than the control group ( $p<0.05$ ). The anxiety and PSQI scores in the patient group were significantly higher in HTG than HOG ( $p<0.05$ ). BRIAN scores were higher in HOG ( $p<0.05$ ). Young age (OR: 1.03) and female gender (OR: 6.01) were determined as risk factors in COVID-19 in terms of developing taste or smell disorders.

**CONCLUSIONS:** It can be stated that patients with COVID-19 have a higher risk of developing mood disorders, irregularity in biological rhythms, and sleep disorders compared to healthy controls. In addition, hospitalized patients with more severe conditions have a higher risk of developing anxiety and sleep disorders. Lastly, young age and female gender variables are directly related to taste and smell disorders in COVID-19.

**Keywords:** Biological rhythms, COVID-19, depression, loss of taste, loss of smell

## COMPARISON OF ELECTROENCEPHALOGRAPHY (EEG) ALPHA POWER VALUES OF PATIENTS WITH GENERALIZED ANXIETY DISORDER AND HEALTHY CONTROL GROUP

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**BACKGROUND AND AIM:** Generalized Anxiety Disorder (GAD) is characterized by high anxiety and difficulty controlling worry, where cognitive functions such as attention, working memory and executive functions are affected. Event-related desynchronization (ERD) controls event-related processes, while event-related synchronization (ERS) controls non-event-related processes. EEG alpha oscillations (8-13 Hz) reflect top-down inhibitory control processes. Alpha ERS provides inhibition of non-event-related processes, it enables cognitive functions to work better with the top-down inhibitory control system. EEG alpha power reduction may reflect a dysfunction associated with the inability to inhibit non-essential information, particularly by the prefrontal cortex. The aim of this study is to investigate whether there is a difference in EEG alpha power values in generalized anxiety disorder patients compared to the healthy control group.

**METHODS:** The ethics committee of the research was obtained from SBU Gülhane Eğitim ve Araştırma Hastanesi with the document number 46418926 dated 06.01.2021. 24 patients and 24 healthy volunteers were included in the study. Edinburgh Hand Inventory Test, Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), State-Trait Anxiety Inventory (STAI-1 and STAI-2), Montreal Cognitive Assessment Scale (MoCA) was administered by the interviewer. EEG was recorded for 5 minutes with eyes closed and 5 minutes with eyes open while the participants were sitting in a comfortable chair in a room isolated from external sounds. Recording was made according to selected locations on the scalp using 10-20 international systems (Fz, Cz, Pz, C3, T3, C4, T4, Fp1, Fp2, F3, F4, F7, F8, P3, P4, T5, T6, O1, O2, A1, A2). The recorded EEG data were transferred to the MATLAB 2021a program. The alpha power values of each channel were calculated using the Welch technique.

**RESULTS:** A statistically significant difference was found between the patients and the control group in alpha power values in the F8 (patients mean  $\pm$ std: 0,82 $\pm$ 0,54  $\mu$ V<sup>2</sup>, control groups mean $\pm$ std:1,53 $\pm$ 1,08  $\mu$ V<sup>2</sup>, p=0,021), P3, F4, P4, Cz, Pz channels with eyes closed (p<0.05). A statistically significant difference was found between the patients and the control group in alpha power values in T3, Fp2, F8, T4, C3,P3, F4, C4,P4, Cz, Pz channels with eyes open (p<0.05). A statistically significant difference was found in alpha power values, especially in the left frontal region (Fp1, F3, F7), in terms of asymmetry in patients compared to the control group (p<0.05). A negative, weak (r=-0.326) and statistically significant (p=0.025) correlation was found between BAI test and F8 channel alpha power value. A positive, weak (r=0.437) and statistically significant (p=0.002) correlation was found between the MOCA test and Pz channel alpha power value but also negative, weak (r=-0.389) and statistically significant (p=0.007) correlation was found between BAI test and Pz channel alpha power value.

**CONCLUSIONS:** In this study, alpha power values were found to be lower in the patient group, so it can be said that the top-down inhibitory control system does not work synchronously in order to prevent irrelevant information. It can be thought that the synchronization between cortical and subcortical structures does not work well and cognitive functions are affected by this situation.

**Keywords:** Alpha Power, Cognitive Functions, Event-Related Synchronization (ERS), Generalized Anxiety Disorder

## THE ASSOCIATION BETWEEN ANXIETY, DEPRESSION, QUALITY OF LIFE, DISSOCIATION AND CHILDHOOD TRAUMA IN THE COVID 19 PANDEMIC ACCORDING TO THE WORKING STATUS OF UNIVERSITY EMPLOYEES IN HOSPITAL AND NON-HOSPITAL UNITS

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**BACKGROUND AND AIM:** Covid-19, which was defined as a pandemic on 11/03/2020 by WHO, has affected all areas of life. The aim of our study was to investigate the association between anxiety, depression, dissociation, quality of life of employees in hospital and non-hospital units and childhood trauma during the pandemic.

**METHODS:** This study was formed between March and April 2021 from the Düzce University hospital group(HG) and control group(CG) individuals working in non-hospital units such as the rectorate and faculty. The groups were interviewed with a sociodemographic questionnaire, Childhood Trauma Scale, the World Health Organization Quality of Life Scale, Beck Depression Inventory, State and Trait Anxiety Inventory, and the Dissociative Questionnaire. Appropriate ethics committee approval was obtained from the Düzce University Ethics Committee(Decision no: 2021/72).

**RESULTS:** The HG consisted of 128(n male: 43,n female: 85) subjects and the CG consisted of 133(n male: 78,n female: 55) subjects. During the pandemic, positivity rate for covid in the HG was 22.7%(n: 29), while the CG was calculated as 18.3%(n: 24) and there was no difference between the groups(p: 0.35). While the rate of those who reported that the risk of past contact was high was 46.9% (n: 60) in the HG, it was calculated as 15%(n: 20) in the CG, and there was a significant difference between the groups(p= < 0.001). There was no difference between two groups in childhood trauma, quality of life, and state and trait anxiety scores(p:0.44; p:0.42; p:0.55; p:0.48). A difference was found between depression scores and dissociative experiences between them(p:0.04; p:0.04). Having Covid-19 did not make a significant difference between the scales. When the hospital and control groups were examined separately for Covid, it was found that Covid patients in the HG had higher scores for anxiety and depression(p:0.009; p:0.03). In the CG, there was no difference between anxiety and depression scores related to Covid status.

When the hospital and control groups were examined separately, it was found that those with childhood trauma in the HG had lower quality of life and higher anxiety and depression scores if they were Covid positive(p:0.02; p:0.004; p, and:0.006; p:0.046). However, in CG, the covid status of those with childhood trauma did not make a difference.

**CONCLUSIONS:** The fact that there was no difference between the hospital and control groups related to covid, quality of life, and anxiety levels, as well as the high level of depression and dissociation in the control group, differ from studies in the literature. The reason for this is thought that uncertainty has decreased as the pandemic has progressed, hospital staff have improved skills to cope with working in risky situations, the use of protective equipment has been learned, and vaccines are widely available. The finding of higher levels of anxiety and depression in covid-positive hospital workers with childhood trauma shows the importance of early traumatic experiences and paves the way for the development of psychiatric disorders in adulthood. It has been observed that studies in the literature focus on one group. Our study may be important in comparing hospital and non-hospital employees and may contribute to the literature.

**Keywords:** Pandemic, Childhood Trauma, Hospital and Non-Hospital Units

## INVESTIGATION OF THE RELATIONSHIP BETWEEN SLEEP-WAKE DISORDERS AND DEMOGRAPHIC AND CLINICAL VARIABLES AMONG HOSPITALIZED PSYCHIATRIC PATIENTS

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**BACKGROUND AND AIM:** Sleep disorders are quite common among psychiatric patients. Despite this, there are a few studies examining sleep problems among hospitalized psychiatric patients in psychiatric wards. The aim of this study was to examine the sleep characteristics of patients hospitalized in the psychiatry service and the effects of sleep disorders on the course and treatment of psychiatric disorders.

**METHODS:** The study was carried out with 90 patients who were hospitalized in the Inpatient Psychiatry Clinic of Recep Tayyip Erdogan University Medical Faculty between 01.02.2020 and 01.01.2022. The semi-structured information collection form, Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness Scale (ESS), Insomnia Severity Index (ISI), Biological Rhythm Assessment Interview (BRAIN), Iowa Sleep Experiences Survey (ISES) were administered to the patients 72-96 hours after their hospitalization by the researcher. At discharge, PSQI, ESS, and ISI were repeated to compare with the initial tests at admission. Patients were classified according to DSM-5 diagnostic criteria as schizophrenia and other psychotic disorders, bipolar and related disorders, depressive disorders, anxiety disorders, and other disorders. During their hospitalization and discharge, the clinical scales specific to the primary diseases already were applied which was also already in the routine clinical procedures. These scales consist of Positive Symptoms Rating Scale (SAPS), Negative Symptoms Rating Scale (SANS), Hamilton Depression Rating Scale (HAM-D), Hamilton Anxiety Scale (HAM-A), Young Mania Rating Scale (YMRS). Ethical approval was obtained on 24.01.2020 with the decision number 2020/03. Obtained data was evaluated using SPSS for Windows 22.0 software programme.

**RESULTS:** It was found that 87.8% of the hospitalized patients had poor sleep quality during their hospitalization, and the prevalence decreased significantly to 63.3%, with the mean total PUKI scores remaining above the threshold value at discharge. It was determined that those who had poor sleep quality before treatment had lower rates of working at any job, higher number of hospitalizations, and received more hypnotic drugs during their current hospitalization. A family history of sleep disorders was associated with poor sleep quality and insomnia. It was determined that there was an inverse relationship between the irregularity in biological rhythms and sleep quality. It was determined that antipsychotics limited the reduction in daytime sleepiness as measured by ESS. General dream experiences were found to be associated with poor sleep quality. There was no difference between psychiatric diagnoses in terms of sleep problems ( $p>0,05$ ). In regression analysis, it was determined that daytime dysfunction limited the decrease in YMRS scores. A significant correlation was found between the change in HAM-D scores and poor sleep quality and insomnia ( $p<0,05$ ).

**CONCLUSIONS:** Sleep complaints are highly prevalent inpatients on psychiatric wards and are related severity of symptoms and may persist even if the symptoms of the primary disease decrease.

**Keywords:** inpatient treatment, psychiatric disease, sleep, sleep disorders

## COMPARISON OF COPEPTIN LEVELS AND THE RELATIONSHIP BETWEEN SLEEP AND CIRCADIAN RHYTHM IN PATIENTS WITH BIPOLAR DISORDER IN ATTACK AND REMISSION PERIODS

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**BACKGROUND AND AIM:** The presence of neurobiological processes and metabolic changes have been shown in the etiology of bipolar disorder. In our study, the levels of copeptin, which is a biologic parameter, and the relationship between sleep and circadian rhythm in patients with bipolar disorder were investigated. According to our assumption: (i) plasma copeptin levels will differ from healthy controls in individuals with BD during both relapse and remission periods; (ii) the difference in copeptin levels in the patient group; worse clinical outcome (more attacks and hospitalizations), higher clinical severity, non-response to lithium treatment, multiple drug use, poor sleep quality, daytime sleepiness, and circadian rhythm disturbance; and (iii) copeptin levels will mediate the difference in sleep and circadian rhythm parameters between BD participants and healthy controls.

**METHODS:** According to the ethical standards accepted in the 1964 Helsinki Declaration, it was unanimously decided that there was no harm in scientific and ethical terms in the realization of our research, with the article of the Clinical Research Ethics Committee of Atatürk University Faculty of Medicine, dated 05.11.2020 and numbered B.30.2.ATA.0.01.00/. Our study included 50 patients in the manic episode period of bipolar disorder, 41 of the same patients in the remission period, and 50 healthy volunteers. Although the sociodemographic data form was filled by all the participants; Young mania rating scale, Clinical global follow-up scale, and Hamilton depression scale were filled in by the clinician in patients with bipolar diagnosis during the attack and remission periods. The Pittsburgh sleep quality index, Epworth sleepiness scale, Morningness-eveningness scale, and Social rhythm scale were completed by patients in remission and healthy volunteers; the bipolar functionality scale was filled only by patients in remission. Simultaneous copeptin, cortisol, hemogram, c-reactive protein, sodium, bone and glucose parameters were checked and recorded from all participants.

**RESULTS:** Copeptin levels were significantly lower than healthy controls during bipolar manic episode ( $p<0,01$ ) and remission periods ( $p=0,05$ ). The cut-off value of copeptin was found to be 4.01 ng/mL in the distinction between manic episode and healthy control. Copeptin levels increased as the bipolar functionality scale score increased. PSQI sleeping drug use score ( $p<0,01$ ), ESS total score ( $p=0,019$ ), and distinctness scores ( $p<0,01$ ) were found to be higher in bipolar remission period than in healthy controls; sleep duration ( $p<0,001$ ), eveningness scores ( $p=0,048$ ) and social rhythm scores ( $p=0,033$ ) were found to be low.

**CONCLUSIONS:** Our findings showed that copeptin levels were lower than healthy controls in bipolar disorder attack and remission periods. It also showed that copeptin levels increased as functionality increased. It is hoped that the negative effects of the disease can be prevented by detecting copeptin and similar biomarkers that may be predictive for bipolar disorder with new studies.

**Keywords:** bipolar disorder, copeptin, sleep quality, circadian rhythm

## COMPARE OF BRAIN ANOMALIES AND PSYCHOPATHOLOGY OF PATIENTS IN A PSYCHIATRIC SERVICE: A RETROSPECTIVE STUDY

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**BACKGROUND AND AIM:** In parallel with the development of neuroimaging methods, the discovery of the relationship between mental disorders and structural brain lesions has become more and more possible. Arachnoid cyst, empty sella, enlarged virchow robin space, cavum vergea, mega cisterna magna, hippocampal remnant cyst are brain anomalies that have been emphasized recently and whose etiology and relationship with neuropsychiatric symptomatology have been investigated. In our study, it was aimed to examine the frequency of anomalies, the size of the location of anomalies, and the relationship between sociodemographic data and psychopathology by scanning brain magnetic resonance (MR) imaging of inpatients in the last 5 years.

**METHODS:** In our study, the files of 504 patients who were hospitalized in Recep Tayyip Erdogan University Psychiatry Service between 01.01.2016 and 31.12.2021 were analyzed retrospectively. It was determined that there were 229 cases with brain MRI scans. Twenty-three patients were not included in the study due to the lack of clarity of brain imaging and incomplete information in the psychiatric follow-up file. A structured form was used for each patient, including sociodemographic and clinical characteristics, and the size and location of anomalies in brain MRI scans. Ethical approval was obtained on 10/03/2022 with the decision number 2022/66. Obtained data was evaluated using SPSS for Windows 25.0 software programme.

**RESULTS:** Our study was carried out in the women's service. Therefore, all of the patients are female patients. Age range (17-81), mean age  $42.62 \pm 14.228$ . The frequency of diagnostic groups was as follows: depressive disorder, 25.2%; schizophrenia and related disorders, 25.2%; bipolar disorder, 24.3%; anxiety disorder, 7.8%; dissociative disorder, 6.3%; obsessive compulsive disorder, 4.4%. When the brain MR imaging of the patients was evaluated, enlarged virchow robin distance in 5 (2.4%) patients, mega cisterna magna in 30 (14.6%) patients, partial empty sella in 57 (27.7%) patients, empty sella in 17 (8.3%) patients, cavum vergea in 4 (1.9%) patients, hippocampal remnant cyst in 35 (17%) patients and arachnoid cyst in 14 (6.8%) patients. When the sociodemographic data and clinical characteristics of the patients were examined with brain MRI findings, a significant correlation was found between the presence of mega cisterna magna and the use of antidepressant medication ( $p=0.026$ ). A significant correlation was found between the presence of arachnoid cyst and the duration of the disease and the history of regular treatment ( $p=0.0002$ ). No significant correlation was found between other data and MR imaging ( $p>0.05$ ).

**CONCLUSIONS:** In our study, it is noteworthy that a high rate of anomaly was detected in brain neuroimaging of cases with a history of psychiatric diagnosis and treatment. Unlike previous studies, the fact that many anomalies were examined together is an important feature of the study. Although statistically significant results were not obtained in our study, in which we investigated the relationship between brain structural anomalies and psychopathologies, we think that it will shed light on the literature on the incidence of associated anomalies in psychiatric diseases. Further studies with larger samples are needed to better understand this issue.

**Keywords:** arachnoid cyst, empty sella, enlarged virchow robin space, hippocampal remnant cyst, cavum vergea, mega cisterna magna

## ILLNESS PERCEPTION IN PATIENTS WITH BIPOLAR DISORDER: CLINICAL, COPING, AND SELF-EFFICACY CORRELATIONS

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**BACKGROUND AND AIM:** Although the role of illness perception in the clinical course of many physical diseases and certain mental disorders has been well described, little is known about illness perception in bipolar disorder so far. This study aims to reveal the relationship between the perception of illness, coping styles, and self-efficacy in patients with Bipolar Disorder. Secondly, to investigate the effects of these variables on the clinical course.

**METHODS:** In this cross-sectional study, we evaluated a cohort of 157 subjects with bipolar disorder recruited from March 2021 to September 2021. Illness perception was measured using the Turkish versions of Brief Illness Perception Questionnaire. Self-efficacy was assessed using the Self-Efficacy Scale. Coping was evaluated using the Ways of Coping Questionnaire. The study was approved by the Clinical Research Ethics Committee of Süleyman Demirel University Faculty of Medicine (Date: 03.02.2021; No:55). This study was conducted in a framework that conforms to the Helsinki Declaration.

**RESULTS:** Of 157 patients who had bipolar disorder ages' mean was  $42.08 \pm 12.92$ . 84 (53.5) of these participants were female, 73 (46.5%) of them were male. Brief Illness Perception Questionnaire had a negative correlation between General Self-Efficacy Scale ( $p<0.001$ ;  $r=-0.376$ ); and had a negative correlation between The Ways of Coping Questionnaire's subscales playful problem-solving ( $r=-0.286$ ;  $p<0.001$ ); positive reappraisal ( $r=-0.337$ ;  $p<0.001$ ); escape-avoidance ( $r=0.216$ ;  $p=0.007$ ). Linear regression analysis was performed to predict the Brief Illness Perception Questionnaire, it was found that a significant regression model [ $F(5,151)=13.769$ ;  $p<0.001$ ], and 29%, of the variance in the dependent variable, were explained by the independent variables.

**CONCLUSIONS:** Lower levels of self-efficacy and a higher frequency of hypomanic, depressive, mixed episodes are linked to increased illness perception, according to our findings. Our findings suggested that depending on their coping techniques, persons with bipolar disorder may have a distinct picture of their disease. Identifying the factors associated with illness perception in patients with bipolar disorder may provide critical information for developing appropriate interventions in the self-management of the disease.

**Keywords:** Bipolar disorder, illness perception, coping, self-efficacy, problem-focused coping, emotion-focused coping

## THE EFFECT OF ANTIDEPRESSANT TREATMENT ON SERUM S100B LEVEL

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**BACKGROUND AND AIM:** Major depression is characterized by depressed mood or anhedonia accompanied by thoughts, speech, psychomotor activity and slowing down in physiological functions, as well as thoughts of worthlessness, anergy and pessimism. The introduction of antidepressant drugs (AD) has revolutionized the treatment of mood disorders. However, different classes of AD have been used to treat depressive symptoms but treatment efficacy is significantly lacking, and 60-70% of patients do not experience remission and 30-40% show no significant response. S100B is a neurotrophic factor that plays a role in neuroplasticity, and neuroplasticity is impaired in depression; however, treatment with antidepressants may restore neuroplasticity. In previous research, the role of S100B in the antidepressant response was investigated in various trials. In this study, we aimed to determine the changes in serum concentrations of S100B which is a neurotrophic factor that is considered to have a role in psychiatric disorders antidepressant drugs (AD) therapy on patients who have major depressive disorder (MDD). The study protocol was approved by the local ethics committee of the Gaziantep University Faculty of Medicine (approval number:14.07.2021-2021/157), and the study was performed in accordance with the ethical standards of the Declaration of Helsinki.

**METHODS:** In this case-control study, 16 healthy controls and 16 volunteers who were diagnosed with major depressive disorder and planned to receive AD treatment have been enrolled. Serum S100 B concentration and psychometric tests in both patient groups were compared with those at baseline and 3 weeks after the intervention.

**RESULTS:** A total of 32 participants, 16 of whom had MDD and 16 healthy controls have been enrolled in this study. In terms of gender, 68.8% (n=11) of the participants were female, 31.3% (n=5) were male. In healthy controls, 43.8% (n=7) were female and 56.3% (n=9) were male. There was no significant difference between the groups in terms of gender (p=0.336). The mean serum S100B concentration in depressive participants was  $344.4 \pm 110.98$  (pg/mL) in depressed patient group and  $141.96 \pm 89.66$  in healthy controls. The mean serum S100B concentration was found to be significantly higher in the patient group compared to the healthy controls (P = 0.001). S100B value decreased from  $322.05 \pm 94.91$  to  $231.23 \pm 52.15$  in the group receiving AD. HAM-D values decreased from  $21.6875 \pm 3.78979$  to  $15.1875 \pm 2.40052$  in the AD group. A significant difference was found in the MDD group in terms of serum S100B concentration and HAM-D values in the later measurements compared to the first measurements (p=0.001, p=0.001).

**CONCLUSIONS:** S100B concentrations are significantly higher in patients with major depressive disorder than in the control group and the serum concentration of S100B decreases with antidepressant therapy. Serum S100B concentrations may be a biological marker in the diagnosis and monitoring of depression in the coming years.

**Keywords:** s100b, antidepressant treatment, major depressive disorder

## THE RELATIONSHIP BETWEEN EATING DISORDER AND AUTOMATIC THOUGHTS IN BIPOLAR DISORDER

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**BACKGROUND AND AIM:** Several studies have shown that the prevalence of binge eating disorder, anorexia nervosa, and bulimia nervosa (BD) are higher in patients with bipolar disorder than in the general population. We aimed to examine the effects of negative automatic thoughts on eating disorders in patients with BD.

**METHODS:** We included 32 patients (aged 18-65) with BD according to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). All the patients were in remission and followed up in the outpatient clinic for mood disorders of the Cukurova University Faculty of Medicine, Department of Psychiatry. We applied the sociodemographic data form, the Eating Attitude Test (EAS), and the Automatic Thought Questionnaire (ATQ) to all participants. The local ethics committee for non-interventional clinical research approved the study (2021/115).

**RESULTS:** Fifteen (46.9%) of the 32 patients were female. We found that 8 (25%) of the patients had an eating disorder. There was no statistically significant difference between the groups regarding mean age and gender. In the group with an eating disorder, the feelings and thoughts towards self and negative automatic thoughts about loneliness and isolation were significantly higher (p < 0.05) than in those without an eating disorder.

**CONCLUSIONS:** Cognitive-behavioral therapy can be recommended for self-directed feelings and negative automatic thoughts about loneliness and isolation for patients with BD and eating disorder comorbidity. We suggest examining the relationship between eating disorder subgroups and automatic thoughts by taking a larger sample group in future studies.

**Keywords:** bipolar disorder, eating disorder, automatic thoughts

## IMPACT OF COVID-19 RELATED DISTRESS ON MENTAL WELL-BEING OF PATIENTS WITH MOOD DISORDERS

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**BACKGROUND AND AIM:** The COVID-19 pandemic, has affected all segments of society. It can be predicted that the negative effects of the pandemic on the physical and mental health of individuals in vulnerable segments of society, such as people with chronic mental disorders, are more pronounced. In studies conducted during the pandemic period, it has been reported that patients with bipolar disorder and major depressive disorder experience more anxiety, depression symptoms, and stress than those without affective disorders. The aim of this study is to evaluate the mental health of patients with mood disorders with the prolongation of the pandemic and to investigate how they were affected by the pandemic process by evaluating them in a late period of the pandemic and to examine the relationship between changes in disease symptoms, sociodemographic and clinical characteristics.

**METHODS:** The patients with mood disorders who were hospitalized prior to the onset of the pandemic between March 2019-March 2020 at the inpatient clinic were reassessed during the pandemic (9-11 months later). Sociodemographic and clinical characteristics, COVID-19 status has been recorded. Hamilton Depression Rating Scale (HDRS), the Fear of COVID-19 Scale, Clinical Global Impression Scale (CGI) were used to evaluate co-pandemic psychopathology. Young Mania Rating Scale (YMRS) were administered to patients having any manic or hypomanic symptoms. The Hamilton Depression Rating Scale (HDRS) and the CGI severity scores at discharge from the inpatient clinic for each patient were recorded for comparison along with sociodemographic variables. The clinical scales performed were compared with those at discharge. Institutional review and approval from the Ethics Committee of Hacettepe University were obtained (GO 20-804,2020/ 17-05).

**RESULTS:** Totally 67 patients are included in the study. Forty-four (65.7%) of the patients were female, while 23 (34.3%) were male. Of the participants, 39 (58.2%) were discharged with the diagnoses of Major Depression, 16 (23.9%) BAD-Depressive Episode and 12 (17.9%) BAD-Manic/Hypomanic Episode. The mean age of the participants was 45.8±19.0 years. The duration of illness was 144.5±123.9 months, the length of hospitalization was 41.6±24.8 days, and the period between the onset of the pandemic and evaluation was 273.5±17.7 days. In clinical evaluations, the mean Fear of COVID-19 Scale score of all patients was 15.3±5.3, HDRS score was 9.4±6.9, and CGI score was 7.7 ± 3.4. 37 (55.2%) participants scored 8 or higher on the HDRS. The mean CGI severity scores and the proportion of those who scored 8 or higher on the HDRS were found to be significantly higher in the co-pandemic assessment. (P< 0.001; P< 0.001 respectively). Those who were diagnosed with COVID-19 reported more exacerbations in symptoms (higher CGI severity scores) (P= 0.005). Significant correlation was found between the Fear of COVID-19 Scale scores and HDRS scores applied in the late pandemic period (rs= 0.249; p=0.042).

**CONCLUSIONS:** Psychopathology of the patients with mood disorders had worsened during the pandemic. Exacerbations in symptoms is related to fear of COVID-19 and being diagnosed with Covid-19. Distress related to COVID-19 pandemic may have caused worsening in the symptoms of the patients with mood disorders.

**Keywords:** Mood Disorders, COVID-19, Distress

## THE EVALUATION OF SUICIDE ATTEMPTS CASES ADMITTED TO THE AKDENİZ UNIVERSITY HOSPITAL

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**BACKGROUND AND AIM:** The rate of suicide attempts is increasing in our country and in the world every year. In this study, it is aimed to search the sociodemographic and clinical features of the patients who have committed suicide and applied to the emergency service.

**METHODS:** The files of 85 patients that have attempted suicide and consulted psychiatry service between 1 January 2017 and 1 April 2017 to Akdeniz University Hospital Emergency Service are evaluated retrospectively and the sex, age, marital status, occupation, the method of suicide, the history of suicide attempts and the information if the patient has had previous psychiatric treatment are evaluated. Ethics committee approval is obtained prior to the study.

**RESULTS:** In this study, 85 cases consulted by suicide attempts belonged to men with % 41,1 rate (n=35) and % 58,8 to women (n=50). The age range of all cases was 18-53 and the average age was 29,01±8,8. Average age among women was 26,98 ± 7,56 and the average age range among men was 32,08 ± 9,97. % 56,4 of the cases (n=48) were detected among single people and % 35,2 (n=30) among married, % 8,2 (n=7) among divorced, % 62,8 of men (n=22) working and % 20 of women (n=10) working. It was also detected that the % 47 of the cases (n=40) had psychiatric illness history before, % 78,8 (n=67) had the first attempt of suicide and % 21,1 (n=18) had many attempts of suicide before. When the type of suicide was examined, % 64,7 of the cases (n=55) were due to drug intake (%63,6 (n=35) of which was non-psychiatric drug, %36, 3 (n=20) of which was psychiatric drugs), %18,8 of which was wrist incision (n=16), %4,7 of which was high jump (n=4), %3,5 of which was tube gas inhalation (n=3), %3,5 of which was hanging oneself(n=3) and %4,7 of which was due to other methods (n=4).

**CONCLUSIONS:** At the end of the study, it is found that women under 30 and single ones have higher rate of suicide. The most important result of the study is that, the attitude of suicide can be observed highly in people not only having psychiatric problems but also not having any history of psychiatric illness with the rate of % 53. Also, it is thought that marriage is protective against suicide due to the fact that the rate of married people committing. These results are consistent with the general literature knowledge. More comprehensive studies including more patients are needed in relation to increasing number of suicide behaviour etiology and results.

**Keywords:** suicide attempts, psychiatry, emergency service

## SEX DIFFERENCES OF THE RELATIONSHIP BETWEEN MARRIAGE, DIVORCE AND SUICIDE: AN ECOLOGICAL STUDY IN 81 CITIES OF TURKEY

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**BACKGROUND AND AIM:** Suicide is a significant public health problem. It leads to both loss of workforce and remarkable long-lasting effects on the individuals they leave behind. The fact that suicide causes loss in many ways has led us to research on this subject. On the other hand, marriage is one of the most important relationships in life, which includes significant gender differences. This study investigates the relationship between completed suicide and age at marriage, divorce-marriage rate, percentage of consanguineous marriage among Turkish women and men. There is a heterogeneous distribution of 81 provinces in Turkey in terms of psycho-socio-demographic characteristics and gender equality. Therefore, the heterogeneity makes it possible to assess completed suicide rates in psycho-social-demographics. Additionally, studies on suicide or mortality by suicide have frequently overlooked sex differences, although men and women have a variety of suicide patterns at a variety of rates. For this reason, we considered it is essential to inquire about sex differences and focused on this issue in our study.

**METHODS:** We calculated marriage age, early marriage ratios, crude suicide rate, and mortality by suicide (completed suicide numbers in 1000 deaths) for both sexes among 81 provinces of Turkey. We used datasets of the Turkish Statistical Institute from the year 2019. No ethics committee approval was needed since we utilized publicly available data. We represented our data as mean and standard deviation or median and quartiles.

**RESULTS:** Women's crude suicide rate median value was 1.87 (1.25-2.58). Women's mortality by suicide median was 3.51 (2.13- 5.11). Men's crude suicide rate median was 6.95 (5.00- 8.68). Men's mortality due to suicide was 10.67 (8.45- 13.65). Consanguineous marriages were 2.67% (1.62%- 5.07%) of all marriages. Divorces were 25.75% (17.42%- 33.19%) of marriages. Women's first marriage age was 24.60 ± 1.07, while men married at 27.67 ± 0.89. The early marriage ratio in 1000 marriages was 30.25 (17.20- 53.17) for women 1.77 (1.08- 2.76) for men.

Women's mortality by suicide was related to consanguineous marriage percentages in all marriages ( $r=0.366$   $p=0.001$ ) and divorce marriage ratios ( $r=-0.240$   $p=0.031$ ). Women's early marriage ratios were correlated to women's and men's mortality by suicide (respectively  $r=0.294$   $p=0.008$ ,  $r=0.241$   $p=0.030$ ). Men's mortality by suicide was also correlated to consanguineous marriage percentages ( $r=0.233$   $p=0.037$ ).

**CONCLUSIONS:** Our study has an ecological design, which does not provide a causal relationship. With this in mind, we believe it is crucial to assess suicide-related factors for both genders separately. As for indicators of patriarchal culture, consanguineous marriages and early marriages may harm both women's and men's mental health. We may interpret divorce marriage ratios as an egalitarian social environment. Although higher divorce rates are related to lesser female mortality by suicide, there is no relationship between divorce rates and male mortality by suicide.

**Keywords:** Suicide, Sex difference, Marital status, Risk Factor, Psycho-socio-demographic Characteristics

## EVALUATION OF THE RELATIONSHIP BETWEEN POSTTRAUMATIC GROWTH AND COGNITIVE FLEXIBILITY IN FEMALE PATIENTS DIAGNOSED WITH BREAST CANCER

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**BACKGROUND AND AIM:** Trauma can be defined as any event that affects and injures people's mental and physical existence in various ways and has negative consequences in their daily lives (1). For example, receiving a cancer diagnosis; can be described as a traumatic experience since cancer is associated with death, the progression of the disease is insidious and slow, the cause of the disease cannot be clearly explained, and stigma due to the diagnosis of cancer (2). The most common type of cancer among women globally is breast cancer. Breast cancer is the most studied type of cancer in the literature as it threatens an organ that shows femininity and is related to sexuality (3). It is known that after traumatic experiences such as breast cancer, along with negative consequences such as depression, post-traumatic stress disorder, and adjustment disorder, some positive changes might be experienced. This change, which is called post-traumatic growth (PTG), causes individuals to; after stressful and challenging life events, positive changes occur in their beliefs about themselves, interpersonal relationships, and perspectives on the world (4). Variables affecting PTG levels in individuals are determined as age, marital status, education level, severity of the traumatic event, perceived social support, and genetic polymorphism. Cognitive flexibility is a cognitive skill defined as thinking about alternative solutions in problematic situations or making functional changes in multiple-option situations (5). To our knowledge, no study has been found examining the relationship between TSD and cognitive flexibility levels in female breast cancer patients with a test specific to cognitive flexibility. In the light of this information, our study aims to determine the PTG levels in female patients diagnosed with breast cancer and to reveal the relationship between sociodemographic data, disease-related variables, and cognitive flexibility levels.

**METHODS:** One hundred twenty-seven people who applied to the Medical Oncology and Radiation Oncology Polyclinics between 01.12.2019 and 01.09.2021 met the inclusion criteria and agreed to participate in the study voluntarily were included in the first part of the study. In the second part of the study, 115 people were included. Of the individuals included; the criteria were to be between the ages of 18-65, to have at least six months passed since the diagnosis of breast cancer, to have completed or not received chemotherapy and radiotherapy treatments due to affecting cognitive functions, and not to have cancer metastasized to the brain. Sociodemographic data form, Post Traumatic Growth Inventory (PTGI), Multidimensional Scale of Perceived Social Support (MSPSS), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), and CANTAB (Cambridge Neuropsychological Test Automated Battery) developed by Cambridge University to measure different cognitive functions in individuals test battery was used.

**RESULTS:** Of the 127 participants included in the study, the mean age was 46.78 (±7.90) years. It was found that 53.5% of the patients had low PTG levels (total PTGI scores between 0-62), and 46.5% had high growth levels (total PTGI scores were between 63-105). A significant difference was found between the occupational status of patients with

low and high PTG levels ( $p=0.008$ ). The rate of working was higher in patients with high PTG levels. A difference was found between the rates of lymphedema development in the arm after surgical treatment between patients with low PTG levels and those with high TSB levels ( $p=0.004$ ). PTG levels of patients who developed lymphedema in their arms after surgery were significantly higher than those who did not develop lymphedema. A difference was found between the MSPSS total scores of patients with low and high PTG levels ( $p<0.001$ ), and those with high growth levels had significantly higher MSPSS total scores than those with low PTG levels. The total number of correct answers in the test evaluating cognitive flexibility in patients with high PTG levels was significantly higher than those with low PTG levels ( $p= 0.005$ ). At the same time, the total number of errors in the test assessing cognitive flexibility in patients with low PTG levels was significantly higher than those with high PTG levels ( $p= 0.028$ ). As a result of the Multivariate Logistics model, which was created to investigate the factors affecting the low PTG level, the MSPSS total scores and cognitive flexibility scores were significant. One point decrease in the patients' MSPSS total scores causes a 1,353 fold decrease in their PTG levels ( $p<0,001$ ), and one point decrease in cognitive flexibility scores causes a 1.016 fold decrease in their PTG levels ( $p=0,021$ ).

**CONCLUSION:** Our study is the first in the literature to reveal the relationship between PTG level and cognitive flexibility in breast cancer patients with computer-based cognitive tests. Similar to the results of other studies in the literature, high PTG levels were found in 46.5% of the patients in our study. The fact that the rate of working is significantly higher in patients with high PTG levels than those with low levels may be related to the fact that these individuals can find more social support resources in their work environment. The regression analysis determined that the most important variable that affects PTG is the level of social support perceived by individuals. In addition, the cognitive flexibility levels of patients with high PTG levels were significantly higher than those with low levels of PTG. This result suggests that individuals with high growth levels can find alternative solutions more efficiently and act more flexibly in the face of traumatic changes.

**Anahtar Kelimeler:** Breast cancer, post-traumatic growth, cognitive flexibility.

## HARM AVOIDANCE, RESILIENCE AND CHILDHOOD TRAUMA IN PATIENTS WITH BIPOLAR I DISORDER AND THEIR UNAFFECTED SIBLINGS

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**BACKGROUND AND AIM:** Temperament has been implicated in the etiology of bipolar disorder. However, previous studies on trait of harm avoidance have varied different results. This study aimed to examine whether the harm avoidance temperament can be regarded as an endophenotype of bipolar I disorder and evaluate its relationship with childhood trauma and psychological resilience.

**METHODS:** We evaluated 95 euthymic outpatients with bipolar I disorder (mean age 38.5, SD 10.5 years; 65.3% female), 58 healthy siblings (mean age 38.4, SD 10.9 years; 50% female), and 58 healthy controls (mean age 38.1, SD 10.5 years; 50% female) using the Temperament and Character Inventory-Harm Avoidance Scale, Childhood Trauma Questionnaire and Resilience Scale for Adults. All participants were evaluated by the researchers using the Turkish version of the Structured Clinical Interview for DSM-IV (SCID-I). Based on the SCID-I, patients with any comorbid psychiatric diagnosis other than BDI or siblings and healthy controls with actual psychiatric diagnosis were excluded from the study. In addition, healthy controls with a history of any known psychiatric disease in a first-degree relative were excluded. The study was conducted in accordance with the Declaration of Helsinki and approved by the local ethics committee of Bakirkoy Mental Health and Diseases Training and Research Hospital (approval number:78).

**RESULTS:** Harm avoidance scores were significantly higher in patients than in the sibling ( $Z = -4.531, p < 0.001$ ) and control ( $Z = -4.916, p < 0.001$ ) groups, while there was no difference between siblings and controls ( $Z = -0.644, p = 1.0$ ). Resilience was negatively correlated with harm avoidance ( $r_s = -0.450, p < 0.001$ ) and childhood trauma ( $r_s = -0.278, p = 0.006$ ) in patients. The patients had significantly lower resilience scores compared to the sibling ( $Z = -3.365, p = 0.001$ ) and control groups ( $Z = -4.888, p < 0.001$ ). However, there was no statistically significant difference in resilience scores between the sibling and control groups ( $Z = -2.000, p = 0.13$ ). Due to the cross-sectional design of the study, harm avoidance in the pre-illness period could not be evaluated.

**CONCLUSIONS:** Childhood trauma history and harm avoidance are associated with lower resilience in patients with bipolar disorder. Bipolar patients show higher harm avoidance than healthy controls, even when in a euthymic state, whereas their unaffected siblings showed no difference from controls in terms of harm avoidance. Further studies are needed to investigate harm avoidance as an endophenotype in bipolar disorder. Considering the impact of psychological resilience on quality of life in bipolar disorder, psychosocial interventions targeting these temperament traits may help enhance patients' quality of life by promoting psychological resilience.

**Keywords:** Bipolar disorder, Childhood trauma, Harm avoidance, Resilience, Sib-Pair study

## EFFECTS OF PSYCHOLOGICAL RESILIENCE ON QUALITY OF LIFE IN PATIENTS WITH BIPOLAR DISORDER TYPE I AND TYPE II

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**BACKGROUND AND AIM:** Stress is an important factor in the onset and recurrence of the episodes in bipolar disorder (BP). Psychological resilience defines as the ability to adapt successfully in face of adversity, trauma, or significant sources of stress. Previous studies showed that patients with BP had lower levels of resilience, and resilience affected more areas of quality of life (QOL) in patients with BP compared with controls. In this context, since there is no studies comparing the subtypes of BP, this study aimed; 1) to compare the psychological resilience and QOL patients with bipolar disorder type I (BP-I) and type II (BP-II) with each other and with healthy controls, 2) to determine clinical and sociodemographic characteristics related to psychological resilience and QOL, 3) to investigate the effects of psychological resilience on QOL in patients with BP-I and II.

**METHODS:** 57 euthymic BP patients (BP-I=31, BP-II=26) and 43 healthy individuals matched with the BP group in terms of age and sex were participated in the study. Structured Clinical Interview for DSM-5-Disorders (SCID-5-CV), sociodemographic and clinical data form, pandemic-related stress questionnaire, Hamilton Depression Rating Scale (HAM-D), Young Mania Rating Scale (YMRS), Resilience Scale for Adults (RSA) and World Health Organization Quality of Life Scale-Short Form Turkish Version (WHOQOL-BREF-TR) were applied. The Ethics Committee of Marmara University Medical Sciences gave ethical clearance (code: 09.2020.746).

**RESULTS:** The number of depressive episodes and subthreshold depressive symptoms were higher in the BP-II group ( $p=0.007$ ,  $p=0.038$ ) than BP-I. RSA total score, physical and psychological QOL scores were significantly lower in BP compared with control group ( $p=0.012$ ,  $p=0.001$ ,  $p=0.022$ ). RSA total score was lower in BP-II compared with BP-I group ( $p=0.033$ ). Between BP-I and BP-II patients, it was observed that the psychological QOL domain was lower in the BP-II than BP-I ( $p=0.006$ ). Perceived stress and pandemic-related stress scores were found significantly higher in BP-II than BP-I ( $p=0.003$ ,  $p=0.025$ ).

Physical exercise duration was significantly positively correlated with psychological resilience in BP group ( $r=0.354$ ,  $p=0.007$ ). Illness duration and total number of depressive episodes were negatively correlated with physical, psychological and social QOL domains in the BP group.

In the regression analysis, sociodemographic and clinical variables were controlled, it was found that resilience positively and statistically significantly predicted the physical ( $\beta=0.287$ ,  $p=0.03$ ), psychological ( $\beta=0.435$ ,  $p<0.001$ ) and social domains ( $\beta=0.455$ ,  $p=0.001$ ) of QOL in the BP group.

**CONCLUSIONS:** Our study showed that patients with BP had lower psychological resilience, physical and psychological QOL than controls. In addition, BP-II patients' psychological resilience and psychological QOL were found to be lower than those of BP-I patients. Considering the results, integrating psychological resilience-based interventions to pharmacologic treatment, not to ignore existing subthreshold depressive symptoms and protecting patients from depressive episodes more effectively may play an important role in improving QOL, especially in the BP-II group.

**Keywords:** Bipolar disorder, psychological resilience, quality of life, perceived stress, pandemic-related stress

## ASSESSMENT OF DAYTIME SLEEPINESS AND SLEEP QUALITY IN BIPOLAR EUTHYMIC PATIENTS

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**BACKGROUND AND AIM:** Sleep problems such as insomnia, early waking, decreased sleep efficiency and excessive daytime sleepiness are frequently observed in bipolar disorder, among other symptoms. In this study, it was aimed to evaluate the relationship between clinical features in bipolar patients in remission, sleep quality and excessive daytime sleepiness.

**METHODS:** Eighty patients aged 18-65 years, in remission period, who were being followed up with a diagnosis of bipolar disorder in the Kırıkkale University Faculty of Medicine Psychiatry clinic were included in the study. Sociodemographic Data Form, Young Mania Rating Scale, Montgomery and Asberg Depression Scale, Observation-Interview Based Daily Sleepiness Inventory (ODSI), Pitsburg Sleep Quality Index and Hamilton Anxiety Rating Scale were used in study. In the comparison of sociodemographic and clinical data between groups; Chi-Square, Mann Whitney U was used. Clinical factors affecting ODSI were evaluated by Multiple Linear Regression Analysis. The research was approved by the Kırıkkale University Faculty of Medicine Ethics Committee (Decision No: 2022.02.02).

**RESULTS:** Daytime sleepiness was assessed with the Observation-Interview Based Daily Sleepiness Inventory (cut off>5). The mean age of the group with daytime sleepiness was  $45.64\pm 13.8$  years and the sleep quality was worse ( $p=0.001$ ). There was a significant difference between the groups in terms of the number of depressive, manic and hypomanic episodes, the number of hospitalizations, seasonality, and treatments ( $p=0.040$ ;  $Z=-2.054$ ,  $p=0.039$ ;  $Z=-2.068$ ,  $p=0.002$ ;  $Z=-3.135$   $p=0.009$ ;  $Z=-2.621$ ,  $p=0.013$ ,  $p=0.001$ , respectively). There was a positive correlation between ODSI and Pitsburg Sleep Quality Index, Montgomery and Asberg Depression Scale and Hamilton Anxiety Rating Scale, and a negative relationship between quality of life ( $r=0.446$ ,  $p<0.001$ ,  $r=0.243$ ,  $p=0.030$ ,  $r=0.223$ ,  $p=0.047$ ,  $r=-0.297$ ,  $p=0.007$ , respectively). The strongest clinical predictors of daytime sleepiness were the number of hospitalizations and the number of hypomanic episodes ( $\beta=0.187$ , 95%CI: 0.040-0.334,  $p=0.013$ ,  $\beta=0.162$ , 95% CI: 0.015-0.310,  $p=0.031$ , respectively).

**CONCLUSIONS:** Sleep quality and daytime sleepiness are closely related with clinical features of bipolar disorder. Routine assessment of sleep disorders and daytime sleepiness in psychiatric interviews and addressing and solving sleep problems independent of mood disorders can improve sleep quality, thereby quality of life.

**Keywords:** Daytime sleepiness, Bipolar disorder, Sleep quality

## THE RELATIONSHIP BETWEEN SEVERITY OF DEPRESSION, METACOGNITION, AND COGNITIVE ATTENTIONAL SYNDROME IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER

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**BACKGROUND AND AIM:** Depression is a commonly seen and serious mood disorder. It causes severe symptoms like depressed mood, deteriorations in cognitive and vegetative functions, and changes in psychomotor movements. Although it can be seen at any age and gender, it is more common, especially between the ages of 25-44. Metacognition which is described as evaluating, monitoring, or controlling the cognitive systems, consists of the knowledge, processes, and strategies about cognition. This term also refers to the fact that how a person thinks, rather than what he thinks, is important in maintaining control over emotions. Cognitive attention syndrome (CAS) is one of the metacognitive coping methods which occurs after real or perceived stress and causes psychopathologies to persist. CAS consists of worry/rumination (perseverative thinking), threat monitoring (attentional strategies), and unhelpful coping strategies (thought suppression, avoidance, substance use). The aim of this study was to determine the relationship between severity of disease, metacognition, and cognitive attention syndrome in patients diagnosed with major depressive disorder.

**METHODS:** A total number of 102 patients diagnosed with Major Depressive Disorder according to DSM-5 diagnostic criteria and 110 healthy controls with similar sociodemographic characteristics were included in the study conducted in the psychiatry clinic of Kırıkkale Yüksek İhtisas Hospital between April 2021 and January 2022. The Sociodemographic Data Form, Beck Depression Scale (BDI), Metacognition Scale-30 (MCQ-30), and Cognitive Attentional Syndrome-1 Questionnaire (CAS-1) were applied to the participants. Informed consents were obtained from the volunteers who agreed to participate in the study. The cross-sectional data were collected by self-reported questionnaires and, compared between the two groups using appropriate statistical analyses. Permission for the study was obtained from the Non-Invasive Research Ethics Committee of Kırıkkale University Faculty of Medicine. (15.04.2021/2021.03.20)

**RESULTS:** According to the data, when the sociodemographic characteristics of patients diagnosed with major depressive disorder (n=102) and healthy controls (n=110) were compared, there was no statistically significant difference ( $p>0.05$ ). However, a statistically significant difference was found between the two groups in the scores of "negative beliefs about uncontrollability and danger" ( $t=-9.054$ ,  $p<0.001$ ), "cognitive self-consciousness" ( $t=-3.595$ ,  $p<0.001$ ), "need to control thoughts" ( $t=-5.154$ ,  $p<0.001$ ), CAS Total ( $t=-6.766$ ,  $p<0.001$ ), "cognitive attentional" ( $t=-7.774$ ,  $p<0.001$ ), and "metacognitive belief" ( $t=-3.918$ ,  $p<0.001$ ). In addition, there was a statistically significant and positive correlation between the BDI scores and "cognitive confidence" ( $r=0.149$ ), "negative beliefs about uncontrollability and danger" ( $r=0.628$ ), "cognitive self-consciousness" ( $r=0.261$ ), "need to control thoughts" ( $r=0.394$ ), CAS Total ( $r=0.492$ ), "cognitive attentional" ( $r=0.557$ ), "metacognitive belief" scores ( $r=0.296$ ).

**CONCLUSIONS:** In our study, it was determined that dysfunctional metacognitions were frequently used and the CAS system was more activated in patients with depression compared to controls. These patients do not trust their cognitive functions and have a low level of self-consciousness. At the same time, they have negative beliefs that anxiety is a dangerous emotion that needs to be stopped. In addition, there is a relationship between the severity of the disease and dysfunctional metacognitions and CAS activation. Further studies are needed for understanding this relationship which may play a key role in the treatment process.

**Keywords:** cognitive attentional syndrome, major depression, metacognition

## THE ROLE OF THE AMYGDALA AND THE OLFACTORY BULB IN BIPOLAR DISORDER ETIOLOGY?

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**BACKGROUND AND AIM:** Determining objective biomarkers such as structural and functional brain abnormalities in bipolar disorder can provide a better understanding of the early diagnosis and pathophysiology of the disease. Accumulated evidence has demonstrated abnormal amygdala activation in bipolar disorder. The olfactory bulb has vigorous connections with the amygdala. Although odor related functions of olfactory bulb have decreased in the evolutionary process, we hypothesized that an evolved olfactory bulb with increased activation in emotion regulation may be one of the main reasons that affect amygdala functions in bipolar disorder. So, we aimed to investigate the bulbos olfactorius and amygdala metabolism in patients with bipolar disorder. Secondly, we examined whether metabolisms are related to the quality of sexual intercourse

**METHODS:** Twenty-six patients diagnosed with bipolar disorder according to DSM-5 diagnostic criteria were included in this study. The olfactory bulb and amygdala metabolism were assessed with fluorodeoxyglucose positron emission tomography/CT in patients with bipolar disorder. The olfactory bulb and amygdala metabolisms were compared with Z scores. Golombok Rust Inventory of Sexual Satisfaction test was applied to the participants. Approval for the research was obtained from the ethics committee of Gaziantep University with the decision number 2019/515.

**RESULTS:** Both olfactory bulb and amygdala metabolism were significantly higher than the Z scores of the controls. There was a positive correlation between right/left amygdala metabolism and right olfactory bulb metabolism ( $p < 0.05$ ,  $r: 0.467$ ,  $r: 0.662$  respectively). A positive correlation was found between left amygdala metabolism and frequency of sexual intercourse. (Bulbus Olfactorius Right uptake mean 1.55, standard deviation 0.15, Bulbus Olfactorius left uptake mean 1.57, standard deviation 0.17, Right Nucleus Amygdala uptake mean 2.04, standard deviation 0.21, Left Nucleus Amygdala uptake mean 2.02, standard deviation 0.34)

**CONCLUSIONS:** This study aimed to contribute to the literature in terms of understanding the etiopathogenesis of bipolar disorder. In bipolar disorder, the main cause of hypermetabolism in the amygdala may be increased metabolism in olfactory bulb. The olfactory bulb may have assumed a dominant role in emotional processing rather than olfactory functions. Also, this study supports that the amygdala is responsible for sexual desire regulation in bipolar disorder

**Keywords:** Amygdala, Bipolar disorder, Olfactory bulb, 18 FDG PET/CT

## TURKISH VERSION OF THE PSYCHOTROPIC-RELATED SEXUAL DYSFUNCTION QUESTIONNAIRE (PRSEXDQ-T): VALIDITY AND RELIABILITY FOR TAKING SELECTIVE SEROTONIN REUPTAKE INHIBITORS

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**BACKGROUND AND AIM:** Sexual dysfunctions are very common in patients with psychiatric disorders and this may be due to the direct effect of the disorder or the side effects of the drugs used (antidepressant and neuroleptics). Current questionnaires cannot distinguish whether sexual dysfunctions are due to psychiatric illness or to drug use. Therefore, special questionnaires are needed to make this distinction. Psychotropic-Related Sexual Dysfunction Questionnaire (PRSexDQ) scale; It is a customized scale to screen for sexual dysfunction due to drug use. Our aim in this study is to validate and reliability of PRSexDQ-T in patients using selective serotonin reuptake inhibitors (SSRI).

**METHODS:** A hundred patients who applied to Ankara Dışkapı Yıldırım Beyazıt Training and Research Hospital Psychiatry Outpatient Clinic between May 2021 and November 2021 and received SSRI treatment for at least 1 month were included in the study. These patients were pre-evaluated by psychiatrist the psychiatry outpatient clinic, and the PRSexDQ-T, Beck Depression Inventory, Arizona Sexual Experience Scale, Golombok Rust Sexual Satisfaction Scale were filled in by the patient. Ethics committee approval (ethics committee date/no:19.04.2021/109-44) was obtained for the study from Ankara Dışkapı Yıldırım Beyazıt Training and Research Hospital, the patients participating in the study were informed in detail, and their written consent was obtained.

**RESULTS:** The mean age of the participants in the study was  $35.46 \pm 9.24$  and 58% were women. The Cronbach Alpha coefficient was calculated as 0.906 for the analysis performed to evaluate the internal consistency of the PRSexDQ-T. In the item-total score analysis, the correlation of all items with the total score was found to be quite high, above 0.7. Correlation coefficients were found between .939 and .985 in the Pearson correlation analysis, which was used to determine the test-retest relationships between the items, and all values were statistically significant ( $p < .01$ ). The analysis of the structural validity of the DIA and the Kaiser-Meyer-Olkin sample fit test performed to evaluate the factor structure showed compliance with factor analysis with a score of 0.83. Bartlett's test of sphericity was also found to be significant ( $p < .001$ ). In the Pearson correlation analysis performed for validity analysis, a large positive correlation was found between PRSexDQ-T and Arizona Sexual Experience Scale total score and subscale scores, and a moderate negative correlation was found between Beck Depression Inventory ( $p < .01$ ).

**CONCLUSIONS:** As a result, we found that the Turkish version of the PRSEXDQ was valid and reliable in the SSRI sample. PRSexDQ-T will come to the fore as a scale that can be used in clinical practice to determine whether the sexual dysfunction detected in patients using SSRIs is due to the disease itself or to a drug side effect.

**Keywords:** sexual dysfunction, validity, reliability, antidepressant

## INVESTIGATION OF CLINICAL CHARACTERISTICS AND TREATMENTS IN ADULTS WITH INTELLECTUAL DISABILITIES

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**BACKGROUND AND AIM:** individuals with intellectual disabilities (ID) are at higher risk for psychiatric and physical comorbid conditions compared to the general population. However, communication problems and atypical presentation may cause inadequate recognition of comorbid conditions. A significant proportion of individuals with ID display challenging behaviors (CB), including destructive, socially inappropriate and self-harming behaviors. CB may be related to communication difficulties, environmental changes, physical and psychiatric comorbid conditions. In our study, we aimed to investigate the presence of CB, accompanying psychiatric and physical diseases and treatment management in individuals with a diagnosis of ID who applied to the psychiatry outpatient clinic.

**METHODS:** Individuals who applied to the psychiatry outpatient clinic between 01.01.2019-01.03.2022 and were diagnosed with ID were included in the study. The research data were analyzed retrospectively. The study protocol was approved by the Selcuk University Local Ethics Committee with the number 2022/149.

**RESULTS:** Fifty patients were included in the study, 58% of the sample was male. Mean age was  $41.46 \pm 15.73$ . 76% of the sample were living in a residential care institution. In the sample, 20% mild, 50% moderate, 30% severe ID was diagnosed. 56% had at least one comorbid physical comorbidity, including any of the causes of ID. Psychiatric comorbid diagnoses were reported in 28% of the patients, and epilepsy was reported in 16%. Comorbid psychiatric diagnoses were schizophrenia (16%), dementia (4%), autism spectrum disorder (4%), schizoaffective disorder (2%), and bipolar disorder (2%). CB was present in 66% of the total sample. Of the entire sample, 92% had at least one antipsychotic (AP), 32% had at least two different APs, and 14% had depot-AP. 24% were using at least one drug for side effects. In 78.3% of AP users, the treatment goal was to control CB. In the whole sample using AP, the rates were 65.2% RSP, 13% OLZ, 10% CLZ; in the sample using AP for CB, the rate of RSP was 77.8%. In the presence of CB, preference for RSP was significantly higher ( $p=0.045$ ). The group with CB had a higher mean daily equivalent dose of chlorpromazine (CPZ) (with-CB =  $598.48 \text{ mg/d}$ , without-CB =  $385.29 \text{ mg/d}$ ). The group living in a residential care institution (mean =  $564.47 \text{ mg/d}$ ) had a higher dose of CPZ equivalent dose than the group living with their family (mean =  $404.16 \text{ mg/d}$ ). There was a significant negative correlation between age and CPZ equivalent doses ( $r = -0.34$ ;  $p = 0.015$ ). There was an association between ID levels and CPZ equivalent dose (mild ID mean =  $317 \text{ mg/d}$ , moderate ID mean =  $561 \text{ mg/d}$ , severe ID mean =  $606 \text{ mg/d}$ ).

**CONCLUSIONS:** In our study, higher CB presence and AP usage rate were found compared to the rates reported in the literature. This may be due to the fact that a high proportion of the sample who lives in a residential care institution, accompanied by a high rate of physical comorbid conditions, and the majority consisted of moderate-to-severe ID individuals. The reason for the negative correlation between age and CPZ equivalent dose; may be due to the decrease in CB severity with age. In the absence of comorbid psychiatric disorders in ID individuals, it is common to prescribe AP drugs to manage CB. Although there is limited evidence-based information on this subject, studies have shown that APs, especially RSP, reduce CB.

**Keywords:** challenging behaviors, disability, intellectual disability, mental development disorder,

## EXAMINING THE RELATIONSHIP BETWEEN PERCEIVED SOCIAL SUPPORT LEVEL AND PHUBBING LEVEL IN UNIVERSITY STUDENTS

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**BACKGROUND AND AIM:** The term “phubbing,” garnered from the words phone and snubbing, refers to behavior of individuals while checking their smartphone ignoring the physical presence of or interaction with people around them. Perceived social support refers to people’s beliefs about how much support is potentially available from their relationships and social contacts and about the quality of this support. In our study, it was aimed to investigate whether there is a relationship between perceived social support level and phubbing level in university students.

**METHODS:** The study was approved by the Cumhuriyet University Ethics Committee (2022-03/23). Sample selection was made by simple random sampling method, and 188 university students were included in the study. Study data were collected using sociodemographic data form, Multidimensional Scale of Perceived Social Support (MSPSS) and Phubbing Scale. Statistical analysis was performed using the SPSS version 26.0 software. The independent samples t-test were used to analyze significant mean change between two variables. The Pearson correlation analysis was used to assess the relationship between the scales.

**RESULTS:** Of a total of 188 students, 72 (38,3%) were males and 116 (61,7%) were females. The mean age was  $21.68 \pm 2.14$  (range, 18 to 27) years. Of all students, 121 (64.4%) had a middle socioeconomic status, 156 (83%) had a nuclear family and 81 (43%) were staying in a dormitory. The perceived academic performance was moderate in 112 students (59.6%). Of all students, 185 (98,4%) had at least one social media membership. The mean daily internet usage time was  $4.82 \pm 2.37$  hours, smartphone usage time was  $4.28 \pm 2.08$  hours. Phubbing levels of women were significantly higher than men ( $t(186) = 2.198$ ;  $p < 0.05$ ). Correlation analysis revealed a negative, significant correlation between phubbing and the level of perceived social support ( $r = -0.256$ ;  $p < 0.001$ ). Correlation analysis revealed a positive, significant correlation between phubbing and smartphone usage time ( $r = 0.261$ ;  $p < 0.001$ ), and phubbing and internet usage time ( $r = 0.208$ ;  $p < 0.01$ ).

**CONCLUSIONS:** Phubbing is a concept with multiple dynamics. Phubbing reduces the quality of social interactions between people in society as people who demonstrate this behavior can present as disrespectful to people around them, indicating that they wish to avoid interpersonal communication or they are not aware of or interested in their environment. Perceived social support refers to people’s beliefs about how much support is potentially available from their relationships and social contacts and about the quality of this support and measures of perceived social support assess the quality or adequacy of social support from a subjective perspective. Research shows that gender can be a moderator in the relationships between phubbing and cell phone, SMS, social media and Internet addictions. While phubbing is related to mobile phone, SMS and social media addictions in women, it is related to internet and game addictions in men. Generally, phubbing mean scores are higher in women than in men. Phubbing is still a research topic in the literature and it is a subject that we do not have enough information about. Therefore, we think that our study can contribute to the literature for understanding the concept.

**Keywords:** perceived social support, phubbing, university students

## COMMON PSYCHIATRIC DIAGNOSES AND FOLLOW-UP RATES IN THE ELDERLY POPULATION

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**BACKGROUND AND AIM:** In the geropsychiatric population, drug interactions and the low compliance of these patients to treatment complicates the follow-up and treatment processes. It is thought that the increasing fear of disease in elderly patients with the Covid-19 pandemic and the isolation about by quarantine periods pave the way for psychiatric diseases. Despite the increasing psychiatric complaints during the pandemic, it is predicted that there is a decrease in the rate of admission to hospital and compliance to treatment of geropsychiatric patients. For this purpose, in this study, it was aimed to evaluate the sociodemographic characteristics, distribution of psychiatric diagnoses and compliance to treatment of patients over the age of 65 who applied to the our psychiatry policlinic in 2021.

**METHODS:** In the study, the applications of patients over the age of 65 who applied to the Balıkesir University Faculty of Medicine Psychiatry Polyclinic between 01.01.2021 and 31.12.2021 were examined by retrospective file scanning.

**RESULTS:** A total of 400 patients, 262 women (65.5%) and 138 men (34.5%) were included in the research. The median age of the patients was 71 (65-94) in women and 71 (65-91) in men. The most common diagnosis of depressive disorder in both genders accounted for 49% of the total quantity of patients; anxiety disorder, which is the second most common diagnosis, 36.7% of the quantity of patients. More common diagnoses after depressive disorder and anxiety disorder are OCD (2.7%) and adjustment disorder (2.7%). Other common diagnoses are bipolar disorder (2.5%), psychotic disorder (2.2%), somatoform disorder (1%), sleep disorder (0.5%). 202 (50.5%) of 400 patients included in the study did not attend the second control. It was observed that 198 patients (49.5%) came to the second control.

**CONCLUSIONS:** Aging is a process that is affected by physiological, biochemical, social and psychological factors. Decreased functionality in the elderly population, social isolation, age-related neuroendocrine changes bring many psychiatric diseases, particularly depressive disorder, anxiety disorder and deterioration in cognitive functions. Psychiatric diseases, which are thought to increase in frequency with the Covid-19 pandemic, reduce the quality of life especially in the geriatric population. For this reason, it is very important to know the common psychiatric diagnoses in geriatric patients, to investigate the relationship of these diagnoses with demographic findings and the evaluation of the compliance rates of the patients are very important in terms of diagnosis and treatment strategies. In the results obtained from our study it was thought that the rate of geropsychiatric patients not coming up for the second control was over 50% may be related to the covid-19 pandemic and additional researches are needed to compare the pre and post-pandemic follow up rates to determine this situation.

**Keywords:** control rates, geropsychiatri, psychiatric disease

## SYMPTOM DIFFERENCES IN NEUROTIC AND BORDERLINE PERSONALITY ORGANIZATION: A CROSS-SECTIONAL STUDY IN PATIENTS SEEKING PSYCHOTHERAPY

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**BACKGROUND AND AIM:** The level of personality organization is considered to be a predictor of the individual's prognosis in medical and psychiatric disorders, as well as the outcomes of psychodynamic psychotherapy. In order to determine patients' level of personality organization, a detailed developmental history should be taken, dominant object relations and defense mechanisms should be defined and defects in ego and superego functions should be evaluated. However, it has not been sufficiently investigated which psychological symptoms can distinguish the level of personality organization. Our objective was to define which clinical psychological symptoms differ between people with neurotic (NPO) and borderline personality organization (BPO).

**METHODS:** The patients referred to the Psychotherapy Outpatient Clinic of the Istanbul Medical Faculty Psychiatry Department between 2016-2021 were consecutively included in our study. Ethics committee approval was obtained, and all participants gave informed consent. Patients were assessed in at least three detailed interviews before starting psychotherapy to identify their psychodynamic features and personality structures. The participants also filled in the Symptom Checklist-90-Revised (SCL-90-R), Borderline Personality Inventory (BPI), Defense Style Questionnaire (DSQ-40) and Adult Attachment Style Questionnaire (AAQ), and Rorschach inkblot test was administered to the participants by an experienced psychologist. Final clinical diagnoses and levels of personality organization of participants were determined in consultation with the supervisor psychiatrist (MBS), who is experienced in diagnosis and treatment of personality disorders. The level of personality organization (BPO or NPO) was defined by several ways: (1) clinical evaluation, (2) BPI cut-off score  $\geq 16$ , (3) Using more immature defenses than neurotic or mature defenses in according to DSQ-40, (4) having an avoidant-anxious vs. secure attachment style according to AAQ, and (5) whether participants displayed 'splitting', 'projective identification', 'low-level devaluation' or 'low-level denial' in their Rorschach test. We investigated which items in the SCL-90-R differed between BPO and NPO participants defined in these five distinct ways.

**RESULTS:** A total of 111 people were included in the study. The mean age of the participants was  $30.14 \pm 11.69$ , and 71.6% were female ( $n=78$ ). Patients with BPO defined according to clinical evaluation had a higher total SCL-90-R score than participants with NPO (mean  $164.4 \pm 62.3$  vs.  $115.6 \pm 53.9$ ,  $p<0.001$ ). Overall, BPO patients tended to score higher on each item in the SCL-90-R. Two SCL-90-R items were found to be significantly higher in BPO patients in all five different assessment methods used to differentiate BPO and NPO. These two items were "77. Feeling lonely when you are with people" and "79. Feelings of worthlessness".

**CONCLUSIONS:** Determining the level of personality organizational takes time, but it is crucial for treatment planning and predicting

treatment outcome. Although we have limitations such that clinical evaluation is not blinded to questionnaire results and Rorschach test, we present preliminary evidence that phenomenologically, 'feeling lonely when being with people' and 'feelings of worthlessness' might distinguish between BPO and NPO cases. Considering that there are situations in which clinicians need to determine the level of personality organization of a patient in a short time, questioning these two symptoms could be particularly helpful.

**Keywords:** Borderline Personality Organization, Defense Mechanisms, Personality Disorder, Psychodynamic Psychotherapy

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## THE RELATIONSHIP OF SOCIAL MEDIA ADDICTION WITH PSYCHOPATHOLOGY AND LIFE SATISFACTION IN MEDICAL STUDENTS

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**BACKGROUND AND AIM:** The increasing usage of social media has brought along concerns about its reflection on people's life, motivations and their mental health. Fear of missing out (FoMO) has been defined as the individual's concern that others are having rewarding experiences in their absence and a persistent desire to stay connected with people in one's social environment. The first component of the definition includes the cognitive function of FoMO, which is anxiety and rumination. The second component includes the behavioral strategy aimed at relieving such anxiety. This behavioral component of FoMO often reinforces frequent checking of social media networks to maintain social connections and not miss out on rewarding experiences. The aim of our study is to investigate the relationship of social media addiction with FoMO, life satisfaction and psychopathology.

**METHODS:** The study included 224 medical student. In the participant selection process, simple random numbers table was used for randomization. Sociodemographic Data Form, Bergen Social Media Addiction Scale, Fear of Missing Out Scale, Life Satisfaction Scale and Brief Symptom Inventory were administered to participants. The relationship between social media addiction and FoMO, life satisfaction and psychopathology was examined. These relations are also discussed in terms of gender difference. Permission was taken from the institutional ethics committee (Ethics committee number: 2020000710-3).

**RESULTS:** Social media addiction and fear of missing out scale scores were found to be significantly higher in women than in men. Social media addiction was associated with FoMO, somatization, negative self-perception, anxiety, depression and total psychopathology. Unlike the general sample, a significant correlation was found between social media addiction and hostility in men. In women, social media addiction and life satisfaction were negatively related. In the analysis for social media addiction, FoMO and depressive symptoms had the highest predictive power. A significant difference was found between the groups in term of FoMO, life satisfaction and psychopathology, when the severely addicted and other group were compared in terms of social media addiction.

**CONCLUSIONS:** Social media addiction is positively related to FoMO and depressive symptoms. Social media addiction is negatively related to life satisfaction for female users. Social media addiction is positively related to hostility for male users.

**Keywords:** Fear of missing out, FoMO, life satisfaction, psychopathology, social media addiction,

## ATTITUDES OF MEDICAL FACULTY STUDENTS AND ACADEMIC MEMBERS TOWARDS MENTAL ILLNESSES

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**BACKGROUND AND AIM:** The negative attitudes and stigmatization towards mental illnesses are common worldwide. Contrary to expectations, it has been reported that negative attitudes towards mental illnesses are also found among medical students and physicians. This study was aimed to investigate the attitudes of first and sixth-year medical students as well as academic members towards mental disorders and to reveal the relationship of these attitudes with sociodemographic data.

**METHODS:** The first and sixth-year students and academic members from Van Yuzuncu Yil University (YYU) Faculty of Medicine who volunteered to participate in the study were included in the study (ethics committee approval no:2022/02-01, date:11.02.2022). In our study, a sociodemographic information form and the Beliefs Towards Mental Illness Scale (BMI) were used as data collection tools. In addition, the relationship between BMI and variables such as gender, marital status, parental education level, and history of mental illness in the family and relatives were investigated. BMI consists of three subscales: Dangerousness (D), Incurability and Poor Social and Interpersonal Skills (IPIS) and Shame (S). A negative attitude is indicated as the total BMI score and the subscale scores increase.

**RESULTS:** A total of 208 participants, 73 first-year, 69 sixth-year students and 66 academicians, took part in this study. Of all participants, 60.1% were male, 70.2% were single, 50% did not report any mental illnesses within their family, 32.2% reported that they had a history of mental problems and 12.5% reported that they had received treatment for a mental problem. The mean BMI total score was  $45.21 \pm 16.3$  for 1st-year students,  $40.88 \pm 16.31$  for 6th-year students, and  $43.44 \pm 18.17$  for faculty members. There was no significant difference between the groups in terms of both BMI total score and subscale scores ( $p > 0.05$ ). There was no significant relationship between BMI total and subscale mean scores for gender, marital status, father's education level, and the presence of a history of mental health problems in the individual or his relatives ( $p > 0.05$ ). The BMI total score ( $p = 0.004$ ) and the IPIS ( $p = 0.01$ ) and D ( $p = 0.003$ ) subscale scores were found to be significantly lower in those whose mother's education level was high school or higher than those whose mother had primary education and lower. In the comparison of the three groups, those who did not report any mental problems, those who reported a mental problem but did not receive treatment, and those who reported and got treatment for a mental problem, the BMI total score ( $p = 0.023$ ) and the IPIS ( $p = 0.018$ ) and D ( $p = 0.049$ ) subscale scores in those who received treatment for their mental problem were found to be significantly lower.

**CONCLUSIONS:** This study's results show that there is no correlation between positive attitudes towards mental illnesses and medical education or medical experience. Physicians' attitudes towards mental illnesses can affect the prevention, early diagnosis, and treatment of mental illnesses. In this respect, there is a need for new approaches that positively develop attitudes towards patients with mental illnesses, both during the medical education process and after graduation.

**Keywords:** Academic members, attitude, medical students, mental disorders

## EXPERIENCE AND ATTITUDES OF GENERAL PSYCHIATRISTS IN TURKEY TOWARDS PERSONS WITH INTELLECTUAL DISABILITY/INTELLECTUAL DEVELOPMENTAL DISORDERS: A CROSS-SECTIONAL SURVEY

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**BACKGROUND AND AIM:** The global burden of psychiatric care of mental disorders in persons with intellectual disabilities/intellectual developmental disorders (ID/IDD) remains unaddressed in general, and in low- and middle-income countries in particular. The aim of this study was to explore the knowledge and attitudes of general (adult) psychiatry practitioners in Turkey regarding their experience of training, views and attitudes towards persons with ID/IDD.

**METHODS:** A self-administered cross-sectional survey was conducted to gather information regarding the medical and postgraduate training experiences, views and attitudes towards ID/IDD. The respondents included general (adult) psychiatry practitioners ( $n = 265$ ) who were either members of the email list of a national association ( $n = 231$ ), or who participated in the survey during a national psychiatry congress ( $n = 34$ ) coinciding with the survey period.

**RESULTS:** Fewer than half of the respondents (47.9%) had received any training on ID/IDD during medical school. Only two-thirds (75.4%) underwent some form of systematic training exposure in ID/IDD during residency. Almost all respondents felt strongly that further specialty training in the ID/IDD would be beneficial. Further, majority of respondents indicated that they would be willing to see patients with ID/IDD despite finding it difficult to accurately diagnose and manage their co-occurring mental disorders. They therefore expressed the need for further public resources being made available to provide care that could help normalize the lives of persons with co-occurring mental disorders and ID/IDD. The most common mental health problem endorsed was "challenging behaviour." The most commonly prescribed psychotropic medication was the antipsychotic class and in particular the use of atypical neuroleptics.

**CONCLUSIONS:** Despite rapid advances in the growth of the academic field of psychiatry and research in the past two decades in Turkey, the results of the present study highlight an important need for vitalization of training in ID/IDD psychiatry during medical and postgraduate training in the country. The recognition of the importance of the ID/IDD psychiatry field and need for normalization and enhancement of community inclusion bodes well for future reforms.

**Keywords:** Intellectual disability, mental health, medical and postgraduate training, knowledge, and attitudes

## BEING A PSYCHIATRIST IN THE EVALUATION PROCESS OF A GUN LICENSE REPORT EXAMINATION: ETHICALLY AND PROFESSIONALLY CHALLENGING EXPERIENCE - A QUALITATIVE STUDY

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**INTRODUCTION:** Many psychiatrists in Turkey participate in evaluating health board reports regarding gun licensing in their daily practice. Also, interestingly, this process is practically based on only evaluation phase. There are situations that psychiatrists have experienced or could experience various difficulties during this task, and to the best of our knowledge, there is not any relevant study about the experiences of psychiatrists during this process. In addition, there is no other country where psychiatrists take part in the gun licensing process in a way similar to that of our country. In this context, the experience of psychiatrists regarding the gun licensing process, their views on their roles in this process, and understanding the ethical dimension are considered important issues. To explore the lived experience of psychiatrists we carried out a qualitative study.

**METHOD:** It was considered that exploring details of the experiences and views of psychiatrists in this process in depth could be useful. For this purpose, using a qualitative research method was deemed appropriate. The study participants included a purposive sample of 19 psychiatrists who actively participated in the gun license report evaluation process in their daily practice. Data for this study are gathered using semi-structured one-to-one interviews. The first author transcribed audio-recorded interviews. The data obtained after the interviews were coded and analyzed using a data-driven inductive thematic analysis method with MAXQDA software

**RESULTS:** Regarding psychiatrists' experience, the licensing process and its relationship to the health system provide an uncertain and unsettling impression. This situation is remarkable in terms of an issue such as individual armament and is challenging for psychiatrists. Taking part in the gun license report process for psychiatrists is a highly challenging experience professionally, ethically and emotionally. For example, the experience of confronting applicants alone or being seen as a sort of barrier to access to weapons is remarkable. In this theme, problems related to standard assessment opportunities and scientific difficulties in predicting situations such as risk draw attention. These problems become evident in the heavy workload of the health system. Psychiatrists resort to various functional and dysfunctional strategies to deal with problems in this process. However, there are structural and general solution expectations and suggestions for the future. It was observed that psychiatrists strongly emphasized reducing individual armament before suggesting these (practical) solutions. Considering that all psychiatrists participating in the study as a finding stated that they were conscientiously opposed to individual armament, these findings become even more ethically and professionally meaningful.

**CONCLUSION:** Since there is no similar study in the literature, our research can be considered as original. We think that this is partly rooted in Turkey's unique position by means of the gun license process in which psychiatrists have been obligated to take part. Based on the experiences of psychiatrists, it can be said that the gun license report evaluation process in its current form involves ethical and scientific problems. It appears very difficult to maintain professional autonomy and ethical principles, especially in the face of the pressure and expectation of daily

practice. In this context, it may be essential to develop comprehensive and attentive policies that align with psychiatrists' multidimensional expectations and concerns.

**Keywords:** gun license, psychiatric ethics, psychiatric evaluation, psychiatrists' lived experience.

## THE ASSOCIATION OF HIGH SELF-FORGETFULNESS WITH PSYCHIATRIC DISORDERS IN PATIENTS WITH MULTIPLE SCLEROSIS

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**BACKGROUND AND AIM:** The objectives of this study were to compare temperament and character profiles in patients with multiple sclerosis (MS) with and without psychiatric disorders, and healthy controls and to explore the factors influencing depression in these patients.

**METHODS:** Sixty-seven patients with relapsing-remitting multiple sclerosis and 50 age- and gender-matched healthy controls were enrolled using a convenience sampling method. Sociodemographic and clinical data were recorded, psychiatric diagnoses were established using structured clinical interviews. Temperament and character traits, depression and anxiety scores were measured with Cloninger's temperament and character inventory, Beck depression and Beck anxiety inventories respectively. Patients with standardized minimal test scores of 23 and less were excluded. This research was conducted in accordance with sound scientific practices and was approved by the university's ethics committee (No: 36371).

**RESULTS:** The character trait, self-forgetfulness was observed higher compared to controls in patients with multiple sclerosis comorbid with at least one psychiatric disorder ( $p=0.001$ ). Patients showed higher anticipatory worry ( $p<0.0001$ ) fear of uncertainty ( $p<0.003$ ) and fatigability ( $p<0.0001$ ) as well. Responsibility ( $p<0.0001$ ), purposefulness ( $p<0.0001$ ), and resourcefulness ( $p<0.0001$ ) were lower in patients than healthy controls, regardless of the presence of a psychiatric disorder. Both low purposefulness and anxiety levels significantly influenced depression, accounting for half of the variance in depression scores ( $R^2=.50$ ,  $F=32.459$ ,  $p<0.001$ ). Temperament and character traits were not correlated with neurological disability. Findings indicated a negative correlation between disease duration and harm avoidance ( $p=0.036$ ,  $\rho=-.26$ ) and a positive correlation between disease duration and the personality traits of self-directedness ( $p=.022$ ,  $\rho=.28$ ) and cooperativeness ( $p=.016$ ,  $\rho=.29$ ). Neither depression nor anxiety was associated with disease duration, the total number of relapses, disability score, or duration of disease-modifying treatment.

**CONCLUSIONS:** Our findings suggest MS patients with a psychiatric diagnosis exhibited greater self-forgetfulness compared to patients without a psychiatric diagnosis and healthy controls. Higher anxiety levels and lower purposefulness influenced depression substantially. Early intervention and adequate treatment of anxiety symptoms, as well as addressing purposefulness may reduce the risk of a developing depression thus preventing its adverse outcomes.

**Keywords:** temperament and character, depression, anxiety, personality, multiple sclerosis

## WHAT DO WE KNOW ABOUT LONG-TERM PSYCHIATRIC OUTCOMES OF COVID-19 INFECTION? A PROSPECTIVE EVALUATION OF THE SURVIVORS

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**BACKGROUND AND AIM:** One of the primary concerns of pandemic is long-term psychological disturbance. Herein, we would like to present a prospective evaluation of psychiatric symptoms of patients survived COVID-19 infection.

**METHODS:** A prospective cohort study approach was chosen to help understand how emotional states of COVID-19 survivors changed in time. Ethical approval was obtained from Cerrahpasa Ethical Committee (15.05.2020-6424). Patients hospitalized due to COVID-19 infection in Cerrahpasa Medical Faculty were evaluated their psychological states by applying HADS, NSESSS, and PSQI. Also, they were obtained clinical status with checklist for symptom severity of infection and investigating medical records. Same patients also reevaluated for psychological status by online survey after three and six months of their discharge. Then all variables statistically analyzed by using SPSS.

**RESULTS:** A total of 143 hospitalized patients were enrolled. Of whom 69 (48%) and 47 (32%) patients responded to follow-up assessments at the third and sixth month, respectively. The mean age of final 25 men (52.8%) and 22 women (46.8%) were 43.7 (SD=13.9).

The mean length of hospital stay was 6.1±3.7 days. During hospitalization, participants reported experiencing mild and moderate infectious symptoms as the number of 20 (42.6%) and 27 (57.4%), respectively. After six month, 31 (66%) and 16 (34%) patients reported mild and moderate protracted symptoms, respectively. The patients' means of the highest CRP and D-dimer level during hospitalization was 38.6 (SD=42.2) mg/dL and 18.5 (SD=24.4), respectively.

Per three time points, there were significant differences in anxiety and depression subscales of HADS and PSQI. In three time points, the mean scores of HADS-A were 6.5 (SD=3.8), 7.1 (SD=4), 4.9 (SD=3.7) ( $p=0.031$ ), HADS-D were 7.2 (SD=3.8), 5.2 (SD=3.4), 5.5 (SD=3.8) ( $p=0.002$ ), PSQI were 5.6 (SD=2.8), 7.2 (SD=2.4), 4.1 (SD=2.5) ( $p<0.0001$ ). Also, total NSESSS scores were changed significantly from hospitalization to six-month follow-up. Mean scores of NSESSS were 7.5 (SD=4.9), 10.5 (SD=5.4) ( $p=0.0015$ ).

The mean length of hospital stay was positively correlated with HADS-A ( $r=0.658$ ,  $p<0.001$ ), HADS-D ( $r=0.564$ ,  $p<0.001$ ), and PSQI ( $r=0.375$ ,  $p<0.001$ ) scores at the sixth month. The highest mean of CRP was positively correlated with the PSQI ( $r=0.312$ ,  $p=0.033$ ) scores during hospitalization; HADS-A ( $r=0.630$ ,  $p<0.001$ ), HADS-D ( $r=0.624$ ,  $p<0.001$ ) scores at the sixth month. The highest D-dimer levels during hospitalization were positively correlated with the PSQI ( $r=0.375$ ,  $p=0.042$ ) scores during hospitalization; HADS-A ( $r=0.374$ ,  $p=0.01$ ), HADS-D ( $r=0.335$ ,  $p=0.021$ ), and PSQI ( $r=0.269$ ,  $p=0.043$ ) scores at the sixth month. The participants' total number of protracted symptoms was positively correlated with their HADS-D scores at the sixth month ( $r=0.319$ ,  $p=0.03$ ).

**CONCLUSIONS:** We found that whereas the patients' distress increased, the anxiety, depression, and insomnia decreased after discharge. Another finding of this study was improving of anxiety took more time than depression. Interestingly, patients' protracted psychiatric symptoms were associated with not only the degree of protracted physical symptoms but also inflammatory response during infectious period and total time of hospital stays. This may support the hypothesis that inflammatory response to COVID-19 infection predict to protracted psychological disturbance. Yet, further studies conducted with bigger population are required to get deeper understanding about long-term mental outcomes of COVID-19 infection.

**Keywords:** counselling and liason psychiatry, COVID-19, inflammation, pandemic, prediction, viral infection

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## ATTITUDES OF PSYCHIATRISTS AND OTHER PHYSICIANS AMONG DELIRIUM

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**BACKGROUND AND AIM:** Delirium is a common syndrome. Comorbid psychiatric symptoms can cause difficulties for physicians in diagnosis and treatment processes and this important clinical situation can often be overlooked. Aim of this study is to examine the attitudes of psychiatrists and other physicians about delirium in terms of knowledge, diagnose, treatment.

**METHODS:** A questionnaire consisting of 25 items was prepared by the researchers based on literature research. Participants were reached through online communication groups and social media, and those who voluntarily consented to participate in the survey were included. One participant without voluntary consent was excluded from the study, and the data of 446 participants, 123 of whom were psychiatrists, were analyzed. Ethics committee approval with protocol number 2021/01-86 was received from Aksaray University Human Research Ethics Committee on 22.02.2021 for this research.

**RESULTS:** The frequency of contact with delirium cases (76.5% of them more than once a month), the fact that they found themselves competent in diagnosing (89.4%) and that it should be diagnosed by all physicians (%70,7) were found to be significantly high in psychiatrists than other physicians. Although the need for psychiatric evaluation in emergency or elective conditions was higher in both groups, 29% of the psychiatrists said that it was appropriate to get a psychiatric opinion only in necessary cases. It was found that the risk assessment before hospitalization (35.6%), taking precautions against the risk of delirium (30%) and the opinion that the measures taken were effective in preventing delirium (69.7%) were lower in non-psychiatric physicians compared to psychiatrists. While no difference was found between the groups in terms of prolonging the length of hospital stay and increasing morbidity, it was found that psychiatrists agreed more that it increased mortality. There was no difference between the groups in the awareness of the increased risk of dementia, and this rate was observed to be lower than expected in the groups (57.0% for non-psychiatry and 56.1% for psychiatry). It has been determined that psychiatrists prefer oral and low doses of haloperidol administration compared to non-psychiatrists. The approaches were similar in terms of treatment duration, and the rate of psychiatrists who express their opinion that this treatment is symptomatic was higher.

**CONCLUSIONS:** It shows that there are still deficiencies in recognizing and managing delirium and knowledge about its effects on patients' lives. Regardless of the type of the specialty, more careful education should be given about delirium and its importance should be emphasized.

**Keywords:** Attitudes, delirium, physician, psychiatry

## INVESTIGATION OF THE RELATIONSHIP BETWEEN CARDIOVASCULAR RISK SCORES AND SOCIODEMOGRAPHIC AND CLINICAL FACTORS IN PATIENTS WITH SCHIZOPHRENIA

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**BACKGROUND AND AIM:** Sedentary life, unhealthy diet, smoking, alcohol, and substance consumption are more common in patients with schizophrenia compared to the general population, and drugs used in the treatment of schizophrenia increase the risk of cardiovascular diseases due to side effects such as obesity, sedation, diabetes mellitus, arrhythmia, metabolic syndrome, and dyslipidemia. While staying in a nursing home may have some advantages such as healthier nutrition, drug compliance, staying away from alcohol and drugs, there are also some disadvantages such as lack of family and social support and a sedentary life. In our study, we aimed to examine the relationship of the 10-year cardiovascular disease risk ratio with clinical parameters such as disease duration, length of stay in the nursing home, number of psychotropic drugs, functionality, and disease severity, using Framingham risk scoring in schizophrenic patients staying in the nursing home.

**METHODS:** In our study, the sociodemographic and clinical data like age, gender, education, duration of staying in the nursing home status, the duration of the disease, the number of psychiatric and antipsychotic drugs, and the functionality evaluated with the General Assessment of Functioning (GAF) scale, and the severity of the disease measured by the Clinical Global Impression Scale (CGI) was collected. Also, Framingham risk scoring, which includes age, gender, total cholesterol, HDL, smoking status, systolic blood pressure, and presence of diabetes mellitus is used for the calculation of cardiovascular risk (CVR). The study was approved by the Ethics Committee of University Of Health Sciences, Istanbul Erenkoy Application And Research Center For Psychiatric And Nerve Diseases (2021.3.7/13)

**RESULTS:** 51 schizophrenia patients staying in a nursing home were included in the study. The mean age of the participants was 49.7±9.36, and the mean disease duration was 22.6±11.07 years. The mean duration of staying in the nursing home was 64.7±41.5 months, the mean number of psychotropics and antipsychotics used was 2.58±1.05 and 1.95±0.77, respectively. The mean 10-year cardiovascular disease risk of the patients was found to be 4.6%. While no correlation was found between CVR and functionality, disease severity, GAF and CGI in the analyzes performed, only age ( $p<0.01$ ), duration of staying in the nursing home ( $p=0.01$ ) and disease duration ( $p=0.04$ ) were correlated with Framingham Scores. It was observed that only the duration of staying in the nursing home remained significant when the duration of staying in the nursing home and duration of illness were controlled for age, since age is a parameter currently used in the calculation of CVR.

**CONCLUSIONS:** In our study, when for age and duration of illness were controlled, we found that the risk of cardiovascular disease increases as the duration of staying in the nursing home increases. Examining the factors mediating this situation in future studies may provide necessary measures to reduce the risk of cardiovascular disease, which is one of the main causes of mortality in schizophrenia.

**Keywords:** bipolar disorder, cardiovascular risk score, schizophrenia, cardiovascular risk factors

## EVALUATION OF PSYCHIATRIC FEATURES OF PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE REFERRED TO THE CONSULTATION-LIAISON PSYCHIATRY UNIT

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**BACKGROUND AND AIM:** The clinical presentation of gastroesophageal reflux disease (GERD) shows a large variety of symptoms like dyspepsia, functional heartburn, chronic sore throat, laryngitis or hoarseness, recurrent or chronic cough, and/or somatoform disorders. The majority of GERD patients can be treated by conservative medical therapy, while surgical therapy should be reserved for patients with severe and progressive diseases. We know GERD with somatoform disorders tends to be unresponsive to medical and surgical treatments. Patients with GERD and associated somatoform disorders have significantly worse levels of quality of life after surgery. So it's important to have a psychiatric follow-up for symptom improvement. This is a retrospective, naturalistic, cross-sectional study in which reflux patients were evaluated in terms of psychiatric comorbidities and treatment response.

**METHODS:** The files of GERD patients who were referred to the council in terms of psychiatric disease evaluation from Ege University Medical Faculty Gastroenterology outpatient clinic between 2021-2022 were scanned. Sociodemographic data of the cases, comorbid psychiatric diagnoses, belching, other somatic symptoms, treatment response, and MMPI results were obtained by retrospectively examining the outpatient follow-up documents. In this study, the sociodemographic characteristics of patients with GERD, their compliance with the follow-up period, the change in GERD symptoms after psychotropic treatment were examined. The data were evaluated with SPSS 25.0 Program and Pearson chi-square and Fisher's Exact Test were applied.  $p<0.05$  was accepted as a statistically significant value.

**RESULTS:** We included 49 patients of which 21 (42.8%) were female and 28 (57.2%) were male. The mean age was found to be 47.5 years. It was determined that 22 patients (44.9%) had applied to psychiatry before. 41 patients (83.6%) had a comorbid psychiatric diagnosis and psychotropic treatment was started. 22 patients (53.6%) could follow their outpatient clinic controls. After psychotropic treatment, improvement in reflux complaints was observed in 11 of 22 patients, partial response was observed in 6, and no response was obtained in 5 patients. It was found that GERD was accompanied by belching in 18 (36.7%) patients and other somatic complaints in 27 (55.1%) patients. MMPI test was performed in 22 of 49 patients, somatization was observed in 20 (90.9%) of 22 patients who underwent MMPI. Belching was frequently associated with other somatic complaints and was statistically significant (Açıklama: İlk gönderideki p değeri sehven hatalı girilmiş olup  $p=0.015$  olarak düzeltilmiştir, anlamlıdır.) ( $p=0.015$ ). When the relationship between patients with comorbid psychiatric disease and the psychotropic response was examined, the p-value was found to be 0.051.

**CONCLUSIONS:** Clinical follow-up of GERD patients requires a multidisciplinary approach involving physicians from gastroenterology, otolaryngology, pulmonology, general surgery, and psychiatry. GERD patients should be examined in detail in terms of psychiatric comorbidity. In this study, the relationship between psychiatric comorbidity and psychotropic response in GERD symptoms was examined, although there was a relationship between them, it was not found to be significant. This result can be explained by the small sample size and not including the patients with partial response to the analysis. At the same time, it should be considered that other somatic complaints may accompany GERD patients with belching.

**Keywords:** GERD, psychiatric comorbidity, somatization

## THE EFFECT OF OF COVID-19 PANDEMIC ON SPORTS MOTIVATION, MOOD AND BURNOUT LEVELS OF PROFESSIONAL ATHLETES

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**BACKGROUND AND AIM:** COVID-19 and the restrictions during this period have negative effects on mental health of individuals. One of the areas affected within the framework of restrictions is sports. Athletes've faced significant changes in their lifestyles, relationships; economy as well as professional goals. They trained in limited days/times, or not at all; couldn't participate in national or international races/matches and experienced motivational loss. Studies show that uncertainty about sports practices, stressful restrictions and worries about returning to competitions increase the anxiety of athletes and impair their motivation. Among the psychological effects of restrictions, isolation/quarantine are fear, irritability, insomnia, decrease in performance and burnout. Surprisingly, studies demonstrate that burnout and other mental problems in athletes are often neglected and inadequately treated. To our knowledge, the number of studies related to the mental effects and burnout of athletes due to COVID-19 is limited. We aimed to examine the changes in the sports lives of professional athletes in Turkey due to the pandemic and the relationship between the COVID-19 fear and the levels of depression, stress, anxiety and burnout.

**METHODS:** Participants were divided into two groups as professional athletes and those who do sports for healthy life (HL). Athletes were then divided into two subgroups as Individual Sports (IS) and Team Sports (TS). Sociodemographic information was obtained using a questionnaire. Participants were assessed with Fear of COVID-19 Scale (FCV-19S), Athlete Burnout Questionnaire (ABQ) and Depression Anxiety Stress Scale-21 (DASS-21). In addition, they were asked number of questions regarding their training/exercise program, motivation and performance. T-test, Pearson correlation and ANCOVA were performed.  $p < 0.05$  was accepted for significance. Study was conducted between April 2021-January 2022. Ethical Committee of Istanbul Faculty of Medicine approved the study by number 256371.

**RESULTS:** 173 people participated in the study; IS=32.4%, TS=29.5% and HL=38.1%. The mean ages of IS, TS and HL were  $22.05 \pm 5.25$ ,  $20.69 \pm 5.6$  and  $26.05 \pm 9.15$ , respectively. No significant difference was found between the groups in terms of psychiatric or chronic medical illness. Rate of COVID-19 diagnosis was highest in TS ( $X^2: 6.685$ ,  $p=0.035$ ). IS reported decrease in duration or frequency of training/exercise programs, more than TS and HL ( $X^2: 7.637$ ,  $p=0.022$ ). Also IS's interpretation about their risk of contracting COVID-19 due to their branch of sports was higher than other two groups ( $X^2: 23.354$ ,  $p < 0.01$ ). We found positive correlations between FCV-19S and ABQ total and subscale scores ( $r=0.347$ ,  $p < 0.001$ ;  $r=0.365$ ,  $p < 0.001$ ;  $r=0.229$ ,  $p < 0.01$ ;  $r=0.257$ ,  $p < 0.01$ , respectively) and DASS-21 total and subscale scores ( $r=0.283$ ,  $p < 0.001$ ;  $r=0.184$ ,  $p < 0.05$ ;  $r=0.396$ ,  $p < 0.001$ ;  $r=0.283$ ,  $p < 0.001$ , respectively). There was no difference between the groups in FCV-19S scores ( $F=1.494$ ,  $p=0.227$ ). Emotional exhaustion scores of TS were lower than IS ( $F=4.329$ ,  $p=0.015$ ); sense of accomplishment scores of TS were lower than both IS and HL ( $F=8.315$ ,  $p < 0.01$ ); total burnout scores of TS were lower than IS ( $F=5.908$ ,  $p < 0.01$ ); depression scores of TS were lower than IS and HL ( $F=8.262$ ,  $p < 0.01$ ); anxiety scores of TS were lower than IS group ( $F=5.372$ ,  $p < 0.01$ ); stress scores of TS were

lower than IS and HL ( $F=10.975$ ,  $p < 0.01$ ); total DASS-21 scores of TS were lower than IS and HL ( $F=8.992$ ,  $p < 0.01$ ).

**CONCLUSIONS:** Compared to IS and HL, Participants in TS were found in better state regarding burnout, depression, anxiety and stress. Advantage in TS could be opportunities for peer support, closer social relations and sharing environment. The fact that IS reported decrease in their training/exercise programs more and they evaluated higher risk of contracting COVID-19 due to their branch of sports may be additional reasons for higher rate of mental problems.

**Keywords:** COVID-19, athletes, burnout, mental health

## INVESTIGATION OF THE PSYCHIATRIC EVALUATIONS AND CLINICAL FOLLOW-UPS OF THE PATIENTS WHO WERE CONSULTED TO THE DEPARTMENT OF CONSULTATION LIAISON PSYCHIATRY FOR LEFT VENTRICULAR ASSIST DEVICE AND HEART TRANSPLANTATION SUITABILITY

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**BACKGROUND AND AIM:** To reveal the descriptive statistics of the psychiatric evaluation of the patients who were consulted for left ventricle assisted device and/or heart transplantation (LVAD/heart transplantation) suitability, as well as the comparison of the clinical course.

**METHODS:** Patients who were consulted to Consultation Liaison Psychiatry (CLP) in Ege University Medical Faculty by Cardiology Clinic between 01.07.2021 and 01.01.2022 for LVAD/heart transplantation compliance were screened. Patients' demographic, psychiatric and cardiologic data were obtained from medical records. Totally 43 patients were referred but there were missing data for two patients.  $p < 0,05$  was assumed significant. This research was approved by Ege University Medical Research Ethics Committee with decision number 22-3.1T/70.

**RESULTS:** Among 43 cases the mean age was  $47.30 \pm 12.51$  and the age range was 18-71 years. There were only two (4.7%) females. 67.4% (n=29) were married. 51.2% (n=22) were primary school graduate. Monthly household income was less than the current official minimum wage for 41.9% (n=18). 53.5% of the cases (n=23) were retired. Only one patient has no social security (2.3%). 62.8% of the cases (n=27) had no significant psychiatric history and 76.7% (n=33) had no psychiatric family history. The rate of the patients who have non-cardiological and non-psychiatric chronic diseases was 53.5% (n=23). 32 patients (74,4%) were approved for LVAD/heart transplantation by CLP. Reasons for the disapproval were insufficiently being informed about the process (n=6), rejecting the procedure (n=4), having a psychiatric disorder that could worsen if the procedure was performed (n=1). 3 of 11 unapproved patients refused the clinical follow-up and did not come to their controls. There was no significant difference regarding to age between the approved ( $46.72 \pm 11.19$  years) and the unapproved patients ( $49 \pm 16.27$ ) ( $p=0.608$ ,  $t=-0,517$ ).

The ratio of the patients who are currently physically well in approved cases is 50% (n=16), while it is 27,3% (n=3) in unapproved group. No statistically significant difference was determined ( $p=0,294$ ). In clinical follow-up, LVAD was inserted in 16 of 32 approved cases. Only 2 of LVAD inserted patients had a poor treatment compliance, and one of them died. Among the 14 patients with a good treatment compliance, 10 patients had a better general health condition in comparison to psychiatric consultation date. The data other than age, gender, CLP approval status, clinical follow-up after CLP evaluation were not accessed for two cases. Among 41 cases, 31 were approved and 10 were unapproved for LVAD/heart transplantation by CLP. 60% (n=6) of the unapproved cases were primary school graduate. There were only

two cases with poor social support within 43 patients, these two were unapproved. The ratios of family history for any psychiatric disease were 30% in unapproved group and 16,1% in approved group, while it was not statistically significant.

**CONCLUSIONS:** Special attention should be paid to the information level of the patients about the procedure, presence of social support, family and the patients' past history for psychiatric illness in LVAD/heart transplantation conformity assessment, and all these should be evaluated in detail. Treatment compliance is also an important variable in maintaining physical well-being.

**Keywords:** LVAD, heart transplantation, consultation liaison psychiatry

## THE RELATIONSHIP BETWEEN SEPARATION ANXIETY, PERCEIVED OVERPROTECTION AND QUALITY OF LIFE IN ADULT EPILEPSY PATIENTS

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**BACKGROUND AND AIM:** Epilepsy is a common neurological disease that affects more than 70 million people worldwide. Comorbidities are common in patients with epilepsy. In one study, nearly a third of people with epilepsy were diagnosed with anxiety or depressive disorder, which is twice the prevalence in the general population. Psychiatric comorbidity predicts worse response to initial treatment with antiepileptic drugs and is associated with increased mortality. Separation anxiety is the state of anxiety experienced when the person is separated from the attachment figure or when there is an expectation of separation. If the anxiety is incompatible with the developmental period and excessive, the diagnosis of separation anxiety disorder is considered. Separation anxiety disorder was previously seen as a childhood disorder, but studies have shown that it can also be seen in adulthood. It has been shown in studies that the overprotectiveness of the family seen in epilepsy patients is a risk factor for Separation Anxiety Disorder. The aim of this study is to examine the relationship between separation anxiety disorder symptoms, perceived overprotection and quality of life in adult epilepsy patients.

**METHODS:** Ethical Committee approval was obtained for this study from Clinical Research Ethical Committee of Istanbul Medeniyet University Göztepe Research Hospital with the number 0468 on 24.09.2021. All patients from Neurology outpatient clinics of Göztepe City Hospital between October 2021-January 2022, whose epilepsy diagnosis was confirmed by neurologists, were recruited. A total of 37 patients were interviewed, 6 were excluded, and 31 were included in the study. The Sociodemographic Data Form, Structured Clinical Interview for Separation Anxiety Symptoms, Separation Anxiety Symptom Inventory, Adult Separation Anxiety Questionnaire, Perceived Overprotection Scale in Epilepsy, Quality of Life in Epilepsy Scale, Beck Depression Scale were applied to the patients.

**RESULTS:** The average age of 31 participants is 33, the participants are consisted of 51.6% female, 48.4% male, 41% married, 59% single. In the analysis of the results, it was observed that there was a positive correlation between adult and childhood separation anxiety scores and perceived overprotection, and this correlation was stronger for childhood separation anxiety. (Adult:  $r=0.360$   $p=0.047$ , child:  $r=0.504$   $p=0.004$ ) Adult and childhood separation anxiety symptoms were also correlated with depression scores. (Adult:  $r=0.563$   $p=0.001$ , child:  $r=0.489$   $p=0.005$ ) It was observed that quality of life scores were decreased as adult and childhood separation anxiety symptoms, perceived overprotection and depression scores were increased. (Respectively;  $r=-0.583$   $p=0.01$ ;  $r=-0.500$   $p=0.004$ ;  $r=-0.444$   $p=0.012$ ;  $r=-0.749$   $p<0.001$ ). In the hierarchical regression analysis, it was observed that only depression scores had an independent effect on quality of life, while symptoms of separation anxiety disorder and overprotection did not have an effect on quality of life independent of depression. (Depression  $\beta = -0.597$ ,  $p<0.001$ ; separation anxiety  $\beta = -0.259$ ,  $p=0.229$ ; overprotection  $\beta = -0.251$ ,  $p=0.076$ )

**CONCLUSIONS:** Comorbidity of psychiatric disorders in epilepsy has been extensively researched in the literature. Separation anxiety disorder, which is a relatively new diagnosis defined by DSM-5 in adults, has not been studied sufficiently in epilepsy. In the study, it was observed that symptoms of separation anxiety were associated with overprotection, and that separation anxiety decreased the quality of life scores, possibly presence of depression. This showed that new studies with larger samples are needed to demonstrate the causal relationship. Thus, it will be possible to contribute to the management of epilepsy patients with a multidisciplinary approach.

**Keywords:** epilepsy, overprotection, separation anxiety

## DEPRESSION AND ANXIETY IN CANCER PATIENTS REFERRED TO PSYCHO-ONCOLOGY SERVICE: COMPARISON OF DATA BEFORE AND AFTER THE COVID-19 PANDEMIC

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**BACKGROUND AND AIM:** The aim of this study is to assess the depression and anxiety levels of patients with cancer who consulted the Psycho-Oncology service before (BP) and after (AP) the pandemic.

**METHODS:** The study was conducted using the descriptive retrospective card scanning method and it consisted of cancer patients who consulted to the Psycho-Oncology service before (2018-2019), and after pandemic (2020-2021) and whose HADS (Hospital Anxiety and Depression Scale) data were registered. The data analysis was performed using SPSS 22.0 software, including a total of 338 patients (n=216 for BP group and n=122 for AP group).

**RESULTS:** The anxiety and depression scores of BP were found  $7.31\pm 4.73$  and  $6.89\pm 5.01$ , respectively, while they were  $99\pm 5.30$  and  $7.43\pm 5.17$  for the AP. When the results for the anxiety levels of BP were compared, a significant differences was observed among the groups depending on sex, psychiatric history, psychiatric treatment status and appointment status. Besides, the comparison of the results for AP indicated a significant differences depending on sex, employment status, psychiatric history and appointment status. Based on the depression results, however, significant differences were obtained in terms of psychiatric treatment status and appointment status for BP, while AP possessed significant difference in terms of sex and appointment status. When the factors related to the anxiety levels were examined, it was found that anxiety was predicted by depression, diagnosis of respiratory system cancer and presence of a psychiatric history in BP group, while results of AP showed that depression, age and presence of a psychiatric history was associated with anxiety. Besides, when we analyzed the factors related to depression levels, it was observed that anxiety, diagnosis of respiratory system cancer and holding a university degree was associated with depression in BP while anxiety and diagnosis of respiratory system cancer predicted it in AP.

Furthermore, a positive correlation was found between depression and anxiety for both groups whereas a negative correlation was obtained between age and anxiety only for AP.

The anxiety levels of individuals diagnosed with gynecological cancer in the BP were found to be higher than those in AP. The depression levels of the individuals in AP who are currently receiving medication were found to be higher than the individuals in BP. In addition, a significant relationship was found between the status of applying to the service before/after the pandemic and the status of metastases.

**CONCLUSIONS:** The high depression levels of individuals receiving medication after the pandemic might be considered as a negative impact of the pandemic. Moreover, the anxiety levels of individuals diagnosed with gynecological cancer in BP were found to be higher than those in AP. On the other hand, the pandemic may also have an influence on the decrease in rate of consulting to the Psycho-Oncology service in patients without metastases. Accordingly, it can be inferred that these patients may not prefer to receive psychological support as they do not have metastases.

**Keywords:** anxiety, cancer, covid-19, depression

## COVID-19 VACCINATION RATES IN ADULTS WITH SEVERE MENTAL ILLNESS ADMITTED TO A HIGH-SECURITY FORENSIC PSYCHIATRY HOSPITAL

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**BACKGROUND AND AIM:** Adults with severe mental illness (SMI) have an increased risk of morbidity and mortality from COVID-19 infection. COVID-19 vaccine hesitancy and refusal might also affect this population. Therefore, we aimed to investigate the COVID-19 vaccination rates and the related factors in adults with SMI in a high-security forensic psychiatry clinic.

**METHODS:** The demographic data, psychiatric diagnosis and related clinical information, and COVID-19 vaccine status of patients with SMI treated in a high-security forensic psychiatry clinic between April 1, 2021, and February 1, 2022, were collected by the electronic hospital and e-pulse records. We recorded the vaccine acceptance, vaccine types, and whether they were fully or partly vaccinated or unvaccinated on 4 March 2022. The study was approved by the Ethics Committee of Ankara City Hospital (protocol number: E2-22-1616) and Scientific Research Platform of the Ministry of Health.

**RESULTS:** Hundred and sixty-five males with SMI were included in the study. The mean age of the patients was 37.8±10 years. Most of the patients were diagnosed with schizophrenia (n=64, 38.8%), followed by atypical psychosis (n=36, 21.8%) and intellectual disabilities (n=25, 15.2%). Moreover, most of the patients were single (75.2%), unemployed (62.4%) and had a secondary education level (24.2%). The mean number of hospitalization was 3,3±3,4. There was no correlation between demographic data, the number of hospitalizations and vaccination rates (all p> 0.05). Of the patients, 81.2% (n=134) were fully vaccinated, 13.9% were partially vaccinated (n=23), and only 4.9% (n=8) were unvaccinated. Of the vaccines administered, 81.2% were Pfizer-Biontec and 18.8% were Sinovac. A booster dose (3rd dose) of the COVID-19 vaccine was available for 80% (n=106) of the patients and of these, 45.3% (n=48) got vaccinated. 66.1% (n=109) of the patients were vaccinated against COVID-19 before hospitalization. Thirty-five (62.5%) out of 56 unvaccinated patients were administered the first vaccination during hospitalization, of which 13 (23.2%) were fully vaccinated after discharge. Logistic regression analysis did not show any effect of diagnosis on vaccination status. Regardless of the diagnosis, patients with a longer disease duration of more than five years were found to be 3.6 times more likely to be vaccinated than those with a duration of five years or less (p=0.019).

**CONCLUSIONS:** Our findings suggest that COVID-19 vaccination rates in patients with mental disorders admitted to a high-security forensic psychiatric hospital are just as high as in the general population. When adults with SMI are hospitalized, the COVID-19 vaccine should be offered, as they are willing to receive the vaccination. Thus, vaccination rates in this population can be increased and morbidity and mortality risk from COVID-19 infection can be decreased.

**Keywords:** COVID-19, forensic psychiatry, SARS-CoV-2, severe mental illness, vaccination, vaccine

## IMMEDIATE EFFECTS OF COVID-19 OUTBREAK ON PSYCHIATRIC OUTPATIENTS: POSTTRAUMATIC STRESS AND INFLUENCING FACTORS

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**AIM:** The effects of coronavirus on psychiatric patients are yet inadequately known. In this study, we aimed to investigate the impact of the coronavirus disease outbreak and public health measures on the psychological well-being of patients with psychiatric disorders.

**METHOD:** This cross-sectional study assessed 436 outpatients recruited from the psychiatry clinic in İstanbul University-Cerrahpaşa. Respondents completed a web-based survey on sociodemographic data, subjective sleep quality, and a range of psychiatric symptoms using the Impact of Events Scale-Revised and Hospital Anxiety and Depression Scale. Ethics committee approval of the study was obtained, (ethics committee approval number: 69683)

**RESULTS:** Respondents conveyed high frequencies of clinically significant post-traumatic stress disorder symptoms (32.6%, Impact of Events Scale-Revised score ≥ 33), anxiety (36.4%, Hospital Anxiety and Depression Scale anxiety score > 10), and depression symptoms (51%, Hospital Anxiety and Depression Scale score > 10). Overall, 20.5% of respondents described that their psychological status was declined after the pandemic, and 12.1% of respondents described poor or very poor sleep. Chronic medical diseases, knowing someone in the social circle diagnosed with the coronavirus, job loss or being on temporary leave after the outbreak, and increased exposure time to television or social media were all positive predictors of increased post-traumatic stress disorder symptoms. The negative predictors were male gender, older age, higher educational attainment, and psychiatric diagnoses of schizophrenia and (to a lesser degree) bipolar disorder.

**CONCLUSIONS:** Our findings suggest that patients with psychiatric disorders are more likely to experience significant psychological distress during the pandemic and that this effect is mediated by a variety of individual, behavioral, and societal factors.

**Keywords:** Anxiety, depression, posttraumatic stress disorder, COVID-19, mental health

## PSYCHOLOGICAL FLEXIBILITY, PARENTAL STRESS AND LIFE SATISFACTION: BEING A PARENT OF A CHILD DIAGNOSED WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER

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**BACKGROUND AND AIM:** Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder that starts in early childhood and continues in later years, manifests itself with attention deficit and hyperactivity/impulsivity behaviors, and affects functionality in many ways. Parents of children with ADHD are under a greater burden of care than parents of children with typical development. As parents struggle to cope with the child's unpredictable symptoms, they experience anger, frustration, helplessness, depressive symptoms, and impaired social/occupational functioning. In recent years, there has been an increase in studies that draw attention to the importance of psychological flexibility in parents, from the perspective of Acceptance and Commitment Therapy (ACT). Parents with high psychological flexibility are more psychologically healthy and inclined to more positive child-rearing practices. The aim of our study is to examine psychological flexibility along with parental stress and life satisfaction in parents of children with ADHD.

**METHODS:** Study group was comprised of 84 volunteer parents of children and adolescents diagnosed with ADHD who applied to the child and adolescent psychiatry outpatient clinic. As the control group 84 volunteer parents of children with typical development were included. Informed Consent Form, Sociodemographic Data Form, Acceptance and Action Questionnaire-II (AAQ-II), Parental Stress Index-Short Form (PSI-SF), Satisfaction with Life Scale (SWLS) were applied to all groups as a questionnaire. In addition, Conners Parent Rating Scale-Revised Short Form (CPRS-RS) was applied to study group as a questionnaire. Parents of ADHD patients and control group parents were compared in terms of psychological flexibility, parental stress, and life satisfaction. Additionally, the relationship between psychological flexibility and other parameters in ADHD parents group was examined. By regression analysis, some factors that are thought to predict psychological flexibility were examined as well. The significance value in the study was accepted as  $p < 0.05$ .

**RESULTS:** KEF-II scores in study group were not statistically significantly different from control group. Higher parental stress scores and lower life satisfaction scores were found in study group, compared to the control group ( $p < 0.05$ ). Positive correlations were found between AAQ-II scores and CPRS-Oppositional subscale, CPRS-Total scores, PSI-SF subscales and PSI-SF total scores ( $p < 0.05$ ). A negative correlation was found between AAQ-II and SWLS scores ( $p < 0.05$ ). In the hierarchical regression analysis, the PSI-Parental distress subscale was found to be significant in predicting psychological inflexibility ( $p < 0.05$ ).

**CONCLUSIONS:** Although there was no significant difference between the case and control groups in terms of psychological flexibility, parents with less psychological flexibility have higher parental stress scores and child's ADHD symptom scores, as well as lower parental life satisfaction scores. Findings suggest the need for psychological flexibility interventions.

Interventions that will increase psychological flexibility will reduce the parenting stress experienced by parents and increase their life satisfaction, while enabling parents to develop adaptive strategies for child's behavioral problems, interact with their children in a healthier way, and implement value-oriented parenting practices.

**Keywords:** Attention Deficit Hyperactivity Disorder, psychological flexibility, parental stress, life satisfaction.

## THE EFFECT OF SOME FAMILY CHARACTERISTICS ON THE RELATIONSHIP BETWEEN MENTAL SYMPTOMS AND LEVELS OF SERUM SEROTONIN AND SALIVATORY CORTISOL

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**BACKGROUND AND AIM:** Psychiatric symptoms (PSs) are also seen in healthy individuals. The aim of this study is to examine some familial characteristics in the relationship between PSs and serum serotonin (5-HT) and salivary cortisol (sCTS) levels in healthy individuals.

**METHODS:** A sociodemographic data form and a psychiatric symptom screening questionnaire (SCL-90-R) were given to 320 healthy individuals (156 males, 164 females) aged between 18-65 years without any mental disorder. Blood and saliva samples were duly taken and evaluated by ELISA method. The research protocol was approved by the Ankara Keçiören Training and Research Hospital Clinic Research Ethics Committee (study number KÖTRH-CREC\_11.07.2012/103). Informed consent was obtained from the participants before participating in the study. Statistical analysis was performed with SPSS 15.0 program. Descriptive statistical data (number, percentage, mean, standard deviation, minimum and maximum), independent sample t test, One-way ANOVA test, Kruskal Wallis H test, Mann-Whitney U test, Pearson Correlation analysis were used in the analyzes. For statistical significance,  $p < .05$  was accepted as significant.

**RESULTS:** The highest PS levels of the participants were obsessive-compulsive symptoms (.92±.80), interpersonal sensitivity (.75±.55) and depressive symptoms (.72±.53), respectively. The general symptom index (GSI) was .61±.46. Psychotic ( $\chi^2(2)=7.021, p=.03$ ) and phobic symptoms ( $\chi^2(2)=7.130, p=.03$ ) in those living in a nuclear family, depression levels in those whose parents lived together ( $t=-2.114, p=.04$ ) was lower. Somatization, anxiety, obsession, depression, interpersonal sensitivity, psychoticism, paranoid, thought, hostility and additional symptom levels were highest in illiterate parents. Phobic symptom levels were highest in those whose fathers were illiterate. In patients with a family history of psychiatric illness, somatization ( $t=2.108, p=.04$ ), anxiety ( $t=2.103, p=.02$ ), obsession ( $t=2.146, p=.03$ ), depression ( $t=2.548, p=.01$ ), anger-hostility ( $t=3.096, p<.001$ ), phobic symptoms ( $t=1.728, p=.09$ ) and additional symptom levels ( $t=2.454, p=.02$ ) and GSI ( $t=-2.477, p=.014$ ) levels were higher than those without a family history of psychiatric disease. 5-HT levels were higher in those who had an extended family, whose parents lived together, whose parents were primary school graduates, and who did not have a family history of mental illness. Serum serotonin levels with somatization ( $r=-.209, p<.05$ ), anxiety ( $r=-.184, p<.05$ ), obsession ( $r=-.136, p<.05$ ), depression ( $r=-.209, p<.05$ ), interpersonal sensitivity ( $r=-.134, p<.05$ ), psychoticism ( $r=-.168, p<.05$ ), paranoid symptom ( $r=-.176, p<.05$ ), hostility ( $r=-.145, p<.05$ ) and phobic symptom ( $r=-.116, p<.05$ ) subscale scores and GSI ( $r=-.181, p<.05$ ) A significant relationship was found between salivary cortisol levels and somatization ( $r=-.156, p<.05$ ), anxiety ( $r=-.177, p<.05$ ), obsession ( $r=-.133, p<.05$ ), depression ( $r=-.194, p<.05$ ), interpersonal sensitivity ( $r=-.146, p<.05$ ), psychoticism ( $r=-.147, p<.05$ ), paranoid symptom ( $r=-.160, p<.05$ ) and phobic symptom ( $r=-.187, p<.05$ ) subscale scores and GSI ( $r=-.174, p<.05$ ) were determined. A significant correlation was observed between serum serotonin levels and salivary cortisol levels ( $r=.487, p<.001$ ).

**CONCLUSIONS:** Familial characteristics have an effect on the relationship between psychological symptoms and serotonin and cortisol levels in healthy individuals, but these characteristics alone are not effective in this relationship. There is a need for studies on other stressor factors that are thought to be effective in the relationship between mental symptoms and serotonin and cortisol levels.

**Keywords:** Family, healthy subject, psychological symptoms, serotonin, salivary cortisol.

## EVALUATION OF THE RISK OF DEVELOPING CARDIOVASCULAR DISEASE IN MAJOR DEPRESSIVE DISORDER

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**BACKGROUND AND AIM:** Although it is known that cardiovascular diseases are seen more frequently and have a worse course in depression patients compared to the normal population, the number of studies conducted on young patients who have not yet had cardiovascular disease and who do not use drugs is very few. Therefore, in our study, it was aimed to compare the risk of cardiovascular disease among depressed patients who have not yet started to use drugs and have not had cardiovascular disease and healthy volunteers.

**METHODS:** In this study, 58 patients diagnosed with depression who applied to DEU psychiatry outpatient clinic and 58 healthy controls with similar characteristics were included. Participants in the patient group were those who did not use antidepressants, were diagnosed with major depressive disorder, and had a Hamilton Depression Rating Scale (HDRS) score of 18 and above. The control group was composed of healthy volunteers who had not been diagnosed with major depressive disorder, dysthymia, bipolar and related disorders, schizophrenia and other psychotic disorders, generalized anxiety disorder, panic disorder, post-traumatic stress disorder in the structured clinical interview for DSM-IV. Verbal and written informed consent were obtained from patients and healthy volunteers. Body mass index-based Framingham Cardiovascular Risk Scores (FCRS) and soluble intercellular adhesion molecule-1 (sICAM-1) levels were used to assess the risk of cardiovascular disease in drug-naïve depressed patients and healthy volunteers. Ethics committee approval was obtained from the Clinical Research Ethics Committee of Dokuz Eylul University before the study began (28.12.2017, 2017/22-33)

**RESULTS:** There were no significant differences in Framingham Cardiovascular Risk Scores ( $p=0.95$ ) and in terms of individual factors such as diabetes ( $p=0.75$ ), hypertension ( $p=0.82$ ), body mass index ( $p=0.34$ ), smoking ( $p=0.56$ ), substance use ( $p=0.56$ ), cardiovascular disease history ( $p=0.13$ ) between patients and healthy controls (HC). Both groups were comparable in terms of sICAM-1 ( $p=0.92$ ).

**CONCLUSIONS:** Commonly found association of cardiovascular risk with major depression might be more prominent in depressed patients in older ages and in patients with recurring episodes. In addition, FCRS may have limitations related to calculating current cardiovascular risk in regions with high cardiovascular risk and low socioeconomic status. As stated in some clinical studies, intermittent follow-up of sICAM-1 levels could be more effective in calculating the risk, rather than an instant evaluation with a single measurement.

**Keywords:** depression, cardiovascular risk, chronic stress

## TEMPERAMENT TRAITS, ALEXITHYMIA, AND ANXIETY AMONG PATIENTS WITH STRABISMUS

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**BACKGROUND AND AIM:** The previous research consistently documented a significant relationship between strabismus and mental disorders. A diagnosis of a physical condition may lead an individual to have a high level of anxiety. Alexithymia is a personality trait and a risk factor for mental and physical disorders, including anxiety disorders. Certain temperament traits become more apparent among patients with some eye diseases. Personality traits, such as alexithymia and temperament, are also considered important in emotion regulation, as they are likely to determine the differences in reactions to stimuli. Therefore, we aimed to examine the temperament traits, alexithymia, and anxiety levels among the under-researched strabismus patients.

**METHODS:** The local ethics committee granted ethical approval (2021/10-18 dated 09.23.2021) to our study. We randomly included 39 patients diagnosed with strabismus in the study. After obtaining their written consent, we collected the data using a demographic and clinical data form, the Beck Depression Inventory (BDI), the State-Trait Anxiety Inventory (STAI-I and STAI-II), the TEMPS Temperament Scale (TEMPS-A), and the Toronto Alexithymia Scale (TAS-20)

**RESULTS:** The findings suggested that strabismus patients experienced mild state anxiety ( $36.5 \pm 9$ ) and moderate trait anxiety ( $40.9 \pm 10.1$ ). While the TAS-20 score was  $54.2 \pm 11.8$ , we found the mean scores on the TEMPS as follows:  $9.6 \pm 4.9$  (TEMPS depressive temperament),  $7.9 \pm 4.9$  (TEMPS hyperthymic temperament),  $7.4 \pm 5$  (TEMPS cyclothymic temperament),  $8.9 \pm 3.9$  (TEMPS irritable temperament), and  $9 \pm 5.2$  (TEMPS anxious temperament). The patients not undergoing strabismus surgery had significantly higher irritable temperament scores than those who did ( $p = 0.04$ ). In general, the patients not undergoing a strabismus operation had significantly higher TAS-20 scores than their counterparts ( $p = 0.004$ ).

**CONCLUSIONS:** The patients with strabismus experienced mild state anxiety and moderate trait anxiety. We could not recognize any specific temperament type in the patients. Yet, those who did not have strabismus surgery were found to be more alexithymic than the others. In the study, we also found that the irritable temperament traits of those who did not undergo surgery were found to be significantly more apparent than those who did, which makes us think that temperament traits may affect the decisions for operations.

**Keywords:** Alexithymia, strabismus, anxiety, temperament

## CORONAVIRUS ANXIETY LEVELS OF THE HEALTHCARE WORKERS, RELATIONS TO PERSONALITY TYPES AND COPING STYLES

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**BACKGROUND AND AIM:** We aimed to evaluate the coronavirus-related anxiety levels, the relationship between their personality types and coping strategies of the healthcare workers who faced not only the burden of disease but also the threat of infecting or death of their families during the COVID-19 pandemic.

**METHODS:** Medical health workers in Denizli province were included in the study on a voluntary basis. An online questionnaire was applied to the all participants. Sociodemographic Data Form which investigates personal characteristics, habits and working conditions; Coronavirus anxiety scale (CAS); Type A Behavior Test (TABT) to determine personality traits; and Coping Styles Scale (CSS) to determine the ways of coping strategies. The data were analyzed with the SPSS 22.0 package program. Approval was granted by the Clinical Research Ethics Committee (no: 60116787-020/37882); and by the Ministry of Health Covid-19 Scientific Research Evaluation Commission (no: 2020-08-06T10\_00\_59)

**RESULTS:** This study included 213 health workers. 72.8% ( $n=155$ ) of the participants were female and 27.2% ( $n=58$ ) were male. It was determined that 93.4% ( $n=199$ ) of the participants CAS scores were below 9; and 6.6% ( $n=14$ ) were at the score of 9 and above. The total CAS scores of the participants with type A personality traits were found to be significantly higher than with type B personality traits. (Type A mean= $2.45$ ,  $sd=3.92$ ) (Type B mean= $1.25$ ,  $sd=2.30$ ) ( $p=0.006$ ). The mean scores of helpless approach and seeking social support of healthcare workers with Type A personality traits were found to be significantly higher ( $p=0.002$ ,  $p=0.007$ , respectively); and the mean scores of self-confident and optimistic approach of healthcare workers with Type B personality traits were found to be higher ( $p=0.041$ ,  $p=0.023$ , respectively). Among the sociodemographic characteristics; it was found that women mostly used seeking social support ( $p=0.001$ ), alone lives mostly used the helpless approach ( $p=0.025$ ), and those with a history of migration used the submissive approach less ( $p=0.002$ ). It was observed that the participants with high CAS scores had a higher helpless approach coping scores ( $p=0.033$ ). There was a negative correlation between coronavirus anxiety and self-confident approach and optimistic approach, and a positive correlation with helpless approach. No correlation was found between coronavirus anxiety and sociodemographic data such as age, gender, education level, years of working in the profession, marital status, living with family, or having a chronic disease. 77.5% ( $n=165$ ) of the participants stated in the questionnaire that they felt burned out during the covid-19 pandemic.

**CONCLUSIONS:** The results of this study in which we aimed to determine the anxiety levels and effective coping skills of health workers in a global public health crisis showed that; those with type A personality traits and female health care workers are more at risk, and those with a self-confident and optimistic approach can cope with stress better. The findings of the current study may be a future guide with regards to measures to be taken for better functionality in other possible pandemics within the scope of preventive mental health.

**Keywords:** coping Styles, Coronavirus Anxiety, Personality Types, Public Health

## PSYCHOLOGICAL EFFECTS OF THE COVID-19 PANDEMIC IN UNIVERSITY STUDENTS

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**BACKGROUND AND AIM:** The aim of this study was to investigate the psychological effects of the COVID-19 pandemic in university students. On this purpose the anxiety, depression, health anxiety and hopelessness levels of the participants also the relationship between these factors was evaluated in this study.

**METHODS:** The Ethics Committee of the Pamukkale University Faculty of Medicine approved the study protocol (dated:25.05.2021, no:10) and 441 university students participated in the study on a voluntary basis. Sociodemographic data form, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Beck Hopelessness Inventory (BHE) and Health Anxiety Inventory (HAI) were applied to the participants by online questionnaire method. 403 students who filled out the questionnaire forms adequately were included in the study. Comparisons between groups for categorical variables were analyzed with chi-square test. When normal distribution was achieved, comparisons between groups in terms of continuous variables were made with Student's T test, and correlation analysis between continuous variables were made with Pearson correlation analysis.

**RESULTS:** The mean age of 403 students included in the study was  $21.3 \pm 2.0$  (18-36). It was determined that 61.5% (n=248) of the participants were female. 88.3% (n=356) lived with their family; 97.3% (n=392) were single; 16.6% (n=67) had chronic disease; 16.4% (n=66) had a history of psychiatric disorder; 29.8% (n=120) of the first degree relatives were healthcare professionals; 13.6% (n=55) had COVID-19; 26.8% (n=108) of the first degree relatives had COVID-19. Among the participants, the rate of alcohol users was 62.3% (n=251) and cigarette users was 30.5% (n=123).

When the groups who had and did not have COVID-19 were compared, it was found that the total scores of BDI ( $p < 0.001$ ), BAI ( $p < 0.001$ ) and HAI ( $p < 0.001$ ) were higher in those who had COVID-19, and the mean total scores of BHE were similar among groups.

The frequency of meeting with friends ( $p < 0.001$ ) and close relatives ( $p < 0.001$ ) in the group that had COVID-19 decreased after the epidemic significantly more than the group that did not have COVID-19. The mean total scores of BDI ( $p < 0.001$ ) and HAI ( $p < 0.001$ ) of the group whose first-degree relatives were healthcare professionals were significantly higher than those of the group whose first-degree relatives were not healthcare professionals. There was no significant difference in terms of mean total scores of BDI and BHI between these two groups. It was found that the mean total scores of BDI, BAE and HAE of those whose first-degree relatives had COVID-19 were significantly higher than those whose first-degree relatives did not have COVID-19, but the total scores of BHI did not differ between these two groups.

**CONCLUSIONS:** The results of this study showed that the levels of anxiety and depression symptoms were more common in those who had COVID-19, whose relatives had COVID-19, and who had a healthcare professional relative. Future studies should be carried out in larger sample groups in order to better understand the possible psychological effects of the pandemic and to develop treatment approaches in this area.

**Keywords:** anxiety, depression, Health Anxiety, Pandemic, University Students

## INVESTIGATION OF MOBBING AND BURNOUT LEVELS OF RESIDENT DOCTORS WORKING IN A UNIVERSITY HOSPITAL

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**BACKGROUND AND AIM:** Health care workers constitute a more risky group in terms of mobbing compared to other occupational groups. This can cause mental symptoms and burnout, especially in doctors. In this study, we aimed to investigate the level of mobbing and burnout in resident doctors.

**METHODS:** 72 volunteer resident doctors working at Mersin University Hospital participated in the study. A sociodemographic data form, Maslach Burnout Inventory (MBI) and Mobbing (Psychoviolence) Scale (MS) were applied to the participants. Ethics committee approval of the study was obtained from Mersin University Social and Human Sciences Ethics Committee. (Decision No: 158)

**RESULTS:** The mean age of the participants was  $29.42 \pm 4.63$ . 22 (30.6%) of the resident doctors thought that they were mobbing someone in the workplace. Again, 44 participants (61.1%) thought that mobbing was applied to them in the workplace. There was no significant difference according to gender and specialty among the participants who thought they were mobbed, but the married ones among the mobbed ones were significantly higher than the single ones ( $\chi^2=9.549$ ,  $p < 0.05$ ). While nearly half of the assistants (51.6%) who were mobbed in the internal specialties stated that they sought a solution, it was determined that none of the assistants in the surgical specialty had any attempt to solve it. 81.8% (n=18) of the participants who stated that they applied mobbing to anyone, stated that they were also mobbed from someone else. The mean scores were MS total (1.09), humiliation (1.23), Discrimination (1.17), Sexual harassment (0.19), and Communication barriers (1.28). A total of MBI was (1.86), emotional burnout (2.20), Depersonalization (1.60), Personal achievement (1.65). In the mobbing assistants, there was a significant increase in the MS total, Humiliation, Discrimination, Sexual harassment, Communication barriers, MBI total, Depersonalization, and Emotional burnout scores compared to the non-mobbed assistant groups ( $p < 0.05$ ). There was no significant difference between those who were exposed to mobbing and those who were not in the personal achievement subscale. There was a positive correlation between all scales and subscale scores except for personal achievement and sexual harassment subscales. A positive correlation was found in all other scales except emotional burnout in the sexual harassment subscale ( $p < 0.05$ ). Personal achievement score was not correlated with other scores. It was determined that the MS score increased the MBI score positively ( $r=0.395$ ,  $p < 0.05$ ). The depersonalization subscale score was significantly higher in surgical branches than in basic sciences and internal medicine ( $p < 0.05$ ). The communication barriers subscale score was significantly higher in surgical branches than in internal branches ( $p < 0.05$ ).

**CONCLUSIONS:** The data we obtained revealed that most of the resident doctors were exposed to mobbing, the level of emotional burnout was high, and mobbing increased the level of burnout. There is a need for solution-oriented interventions and regulations in order to remove the pressure on assistant doctors, increase occupational safety and productivity, provide adequate or effective service to their patients, and prevent injustices in the working environment. We think that in this study, which investigates the factors predicting mobbing and burnout, can provide an idea for more comprehensive studies to be done in the future.

**Keywords:** assistant, burnout, doctors, mobbing,

## DECREASE IN FUNCTIONALITY IN NON-DEFICIT SCHIZOPHRENIA AFTER THE COVID-19 PANDEMIC

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**BACKGROUND AND AIM:** Precautions, bans and physical restrictions have affected mental health during the covid-19 pandemic. The aim of our study was to compare the functionality of patients with deficit and non-deficit schizophrenia for a possible decrease after the pandemic. Presence of COVID-19 infection in the family is an additional stressor so discovering the effect of the history of covid-19 infection on functionality was the secondary aim of our study.

**METHODS:** Patients with a diagnosis of schizophrenia who were followed up in the community mental health center of our hospital for at least 2 years (one year before and one year after the pandemic) were included in our study. Personal and Social Performance Scale (PSP) scores were compared to assess functionality before and after the pandemic. After the comparison of PSP scores of all patients with schizophrenia one year before and after the pandemic (with paired samples t-test), the comparisons were also made for the patients with and without deficit syndrome (with related-samples Wilcoxon signed rank test). In addition, the effect of having a personal or family history of covid-19 infection on PSP scores were compared. Medical records, interview with the medical advisors of the patients and clinical examination with Brief Psychiatric Rating Scale (BPRS) were used to conclude for the presence of deficit syndrome (with “by proxy” method). Ethical approval was obtained for the study (decision no:2021-08-31).

**RESULTS:** There were 44 patients with schizophrenia (20 male, 24 female) within the inclusion criteria. Mean age of the patients was  $42.3 \pm 11.05$ . Duration of disorder was  $16.3 \pm 9.58$  years and age of onset of disorder was  $25.9 \pm 7.13$  years. Number of lifetime hospitalizations were  $4.6 \pm 4.68$ . 95.5% of the patients were living with their family. The rate of unemployment was 88.6%. The rate of using LAI antipsychotics was 63.6% and 34.1% of the patients were using LAI without additional oral antipsychotic. In the 44 patients, there was a significant difference between the pre-pandemic ( $58.5 \pm 14.73$ ) and the post-pandemic PSP scores ( $55.8 \pm 14.23$ ;  $t = 2.663$ ,  $p = 0.01$ ). There were 13 patients fulfilling the criteria for syndrome of deficit schizophrenia. The PSP scores of the patients with deficit schizophrenia were similar before and after the pandemic ( $60.4 \pm 16.6$  vs  $60.0 \pm 16.2$ ;  $p > 0.05$ ) but, the scores of patients with non-deficit schizophrenia were significantly lower after the pandemic ( $57.7 \pm 14.05$  vs  $54.1 \pm 13.19$ ;  $p = 0.001$ ). There was no significant difference in the PSP scores in the comparison of the presence ( $54.0 \pm 14.11$ ) or absence ( $56.4 \pm 14.44$ ) of covid-19 infection ( $p > 0.05$ ).

**CONCLUSIONS:** The decline in functionality observed in patients with schizophrenia may be related to generalized stressors related to the pandemic, rather than the history of covid-19 infection in the family. Patients with non-deficit schizophrenia may be prone to the stressors of the pandemic, but this finding may be the result of a limitation of PSP scale in measuring functionality in deficit schizophrenia.

**Keywords:** schizophrenia, covid-19, deficit schizophrenia, functionality

## ASSOCIATION BETWEEN COVID-19 RISK AND CLOZAPINE

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**BACKGROUND AND OBJECTIVE:** Advancing age and the presence of a comorbidity increase mortality in COVID-19 disease. Approximately 70% of patients with schizophrenia have one or more comorbidities. The rate of smoking, which is between 20-30 in the general population, is between 50-90% in schizophrenia patients. For these reasons; schizophrenia patients hospitalized for COVID-19 require higher level of mechanical ventilation, experience higher respiratory failure, and have higher mortality rates than other patients. Compared with other antipsychotic drugs, clozapine has been found to significantly reduce adaptive immunity and lower IgG, IgA and IgM levels. In this study, it was aimed to investigate whether the risk of COVID-19 increases in schizophrenic patients taking clozapine.

**METHOD:** Approval of ethic committee was obtained from the Health Sciences University Bakırköy Dr. Sadi Konuk Training and Research Hospital Clinical Research Ethics Committee on 15.03.2021 with protocol number 2021/134. 321 schizophrenic patients registered. Sociodemographic data, smoking, medications and comorbidities of these patients, and COVID-19 PCR results were retrospectively examined.

**RESULTS:** The mean age of patients was  $48.66 \pm 12.31$  years. 215 patients were male and 106 patients were female. There was no significant difference between the patients using clozapine and non-clozapine antipsychotics in terms of education, marital status, occupational status and comorbidities ( $p > 0.05$ ). It was found that patients taking clozapine had significantly more psychiatric hospitalizations than patients using non-clozapine antipsychotics ( $p < 0.05$ ). 38 (11.8%) patients were diagnosed with COVID-19. There was no significant difference in the frequency of diagnosis of COVID-19 between patients using and not using clozapine ( $p > 0.05$ ).

**CONCLUSIONS:** In our study, in which we investigated the frequency of COVID-19 diagnosis of patients taking clozapine and non-clozapine antipsychotics, no significant difference was found. There are studies in the literature that the use of clozapine increases the risk of COVID-19 by 2-3 times. Such an increase may be observed due to clozapine-related side effects, especially metabolic side effects. In our study, the use of clozapine did not increase the risk of COVID-19; the reason for this may be that there is no significant difference in comorbidities between clozapine users and non-clozapine antipsychotic users. Studies with larger sample sizes are needed to understand whether clozapine increases the risk of COVID-19.

**Keywords:** clozapine, COVID-19, Schizophrenia

## CURRENT SUICIDAL BEHAVIOR IN FIRST-EPIISODE PSYCHOSIS: MAY INFLAMMATORY MARKERS DISCRIMINATE FROM NON-PSYCHOTIC SUICIDES?

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**BACKGROUND AND AIM:** Several psychiatric disorders including psychotic and non-psychotic conditions may be presented with suicidality as there might be multiple predisposing factors to lead the patient to suicidal behavior (SB). There are yet no definitive explanation to address to the neurobiological mechanisms of suicide where inflammation might have a role. The neutrophil/lymphocyte, platelet/lymphocyte, monocyte/lymphocyte ratios (NLR, PLR, MLR respectively) are inexpensive and easily reproducible biomarkers of inflammation while high neutrophil/albumin ratio (NAR) indicates an enhanced inflammatory status. Here, the study was aimed to investigate the possible associations between SB and inflammatory markers among first-episode psychosis (FEP) and non-psychotic patients as compared with healthy controls (HC).

**METHODS:** Study sample was constituted of 282 subjects (157 male, 125 female). The sample included 31 FEP patients with current SB (FEP+S), 69 FEP patients without SB (FEP-S), 25 non-psychotic patients with current SB (NPS) and 157 HC subjects (ages  $\mu=31.61\pm 9.60$ ,  $29.68\pm 7.49$ ,  $34.88\pm 14.36$ , and  $32.08\pm 11.11$  years respectively). Ethical approval was obtained from the Ethical Committee (October 12, 2021; 21/595). NLR, PLR, MLR and NAR data was retrieved from each patient's medical record. Alongside descriptive statistics of the study sample, ANOVA with Tukey HSD post-hoc test was used for pairwise comparisons of account of inflammatory markers in four groups. A binomial logistic regression analysis was performed to examine the predictive power of inflammatory markers in the presence of FEP in SB.

**RESULTS:** The results of ANOVA revealed that a statistically difference was found in NLR (F:4.278,  $p=0.006$ ), MLR (F:4.530,  $p=0.004$ ) and NAR (F:15.890,  $p<0.001$ ) between groups. Despite NLR, MLR and NAR were non-significantly higher in all patient groups than in controls, statistical significance was observed in NLR between FEP-S and controls ( $p=0.004$ ), in MLR between NPS and controls ( $p=0.004$ ), and in NAR between all three patient groups (FEP+S, FEP-S, and NPS) and controls ( $p<0.001$ ,  $p<0.001$ ,  $p=0.001$  respectively). When adjusted for gender, logistic regression analysis including all of four markers revealed that NLR (B:-1.189, S.E.:0.596,  $p=0.046$ ) predicted the presence of FEP in patients with SB.

**CONCLUSIONS:** In the current study, plasma levels and ratios of inflammatory markers in all patient groups (FEP+S, FEP-S, and NPS) and HC were compared. Although different ratios are significant in each of the patient groups than HC, the current study validates the role of inflammation in psychosis rather than in SB. As a window into the etiology of both SB and psychosis, previous studies have shown the presence of inflammation that might contribute to the pathogenesis of psychotic conditions by causing increased cytokine levels or microglial activation. Furthermore, dysfunction of glutamate and monoamine

neurotransmission may be a potential consequence of inflammation which might be linked to SB. However, according to the findings of present study, it seems inappropriate considering elevated inflammatory markers as evidence to date for an increased risk of suicide attempt. Taken together, considering the relatively high prevalence of suicidality among schizophrenia patients, it is crucial to clear precise neuropathogenesis to prevent dangerous attempts before they happen. It would be of interest for future studies to investigate with a larger sample size.

**Keywords:** Psychotic disorders, Suicide, Neuroinflammation, Inflammation, Schizophrenia

## CAN THE IMBALANCE BETWEEN NEUROTROPHIC AND APOPTOTIC PROTEINS BE THE "BEWARE THE IDES OF MARCH" FOR UNAFFECTED RELATIVES OF SCHIZOPHRENIA PATIENTS?

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**BACKGROUND AND AIM:** Schizophrenia (SZ) is a mental disorder with a strong genetic basis as well as epigenetic aspects. Converging evidence suggests that schizophrenia is a progressive neurodevelopmental disorder on the basis of synaptic pruning. Since siblings of patients with SZ can share certain endophenotypes with subjects with SZ, these siblings are pretty important for differentiating between trait and state markers. We aim to characterize balance between pro-BDNF/mature BDNF and its receptors p75NTR/TrkB which is thought to have a role in synaptic pruning as a possible endophenotype of schizophrenia.

**METHODS:** Forty drug-naïve patients with first-episode psychosis (FEP) matched for age, gender and level of education, forty unaffected siblings (UAS) of patients with FEP and as well as 67 healthy controls (HC) were included in the study. Symptoms at the time of evaluation were assessed with the PANSS scale by an experienced psychiatrist. Blood samples were collected from all participants to determine BDNF, pro-BDNF, TrkB and p75NTR, PAI1, tPA, ACTH and cortisol levels

**RESULTS:** While plasma level of m-BDNF were lowest in the healthy sibling of patients group, plasma level of m-BDNF were highest in the healthy control group. Nevertheless, m-BDNF plasma levels of all 3 groups were statistically different from each other. While the pro-BDNF plasma levels of the healthy control group were similar to those of the patients with FEP, the pro-BDNF plasma level in the healthy siblings of the patients with FEP was lower than those in the patients with FEP group. We analyzed the differential power of single m-BDNF, pro-BDNF, p75NTR, TrkB, PAI-1, pro-BDNF/m-BDNF and p75NTR/TrkB level in the tPA-BDNF pathway by the ROC analysis. The relevant analysis results show many of single m-BDNF, pro-BDNF, p75NTR, TrkB, PAI-1, pro-BDNF/m-BDNF and p75NTR/TrkB level could help differentiate first episode psychosis and their siblings from HCs.

**CONCLUSIONS:** The primary finding of the current study is that the ratios of pro-BDNF/ mature BDNF and p75NTR / TrkB were significantly higher in FEP patients and their UAS compared to the HC. The delicate balance between stimulatory and inhibitory proteins in the tPA-BDNF pathway is very important in maintaining homeostasis in the brain. A disruption of this balance towards enhanced apoptosis may trigger synaptic pruning and contribute towards the pathogenesis. It is also very important to mechanistically investigate the pathogenesis of psychosis in the UAS by establishing endophenotypes in SZ. Further research is essential to better define the possible risk of disease in UAS and to understand the possible mechanisms that protects the UAS from disease.

**Keywords:** apoptosis; BDNF, neurotrophin; proBDNF; schizophrenia; synaptic pruning,

## COMPARISON OF BIOCHEMISTRY AND WHOLE BLOOD PARAMETERS OF FIRST ATTACK PSYCHOSIS AND CHRONIC SCHIZOPHRENIA PATIENTS

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**BACKGROUND AND AIM:** Schizophrenia is a chronic mental disorder that affects approximately one percent of the population and its etiology has not been clarified yet. Neuroinflammation is considered to be involved in the pathophysiology of schizophrenia. Complete blood count and serum biochemistry tests are simple, affordable and reliable indicators of inflammation. Although there are many studies in the literature investigating the parameters of inflammation between patients with schizophrenia and healthy controls, the number of studies for this aspect among patients with first attack and chronic schizophrenia is limited. The aim of our study is to compare blood parameters in patients with first episode psychosis and chronic schizophrenia and to examine the relationship between parameters and the disease.

**METHODS:** The sample of the retrospective study consisted of 194 male patients diagnosed according to DSM-5 diagnostic criteria, including 96 first-episode psychosis patients and 98 chronic schizophrenia patients, who were hospitalized in the Gülhane Training and Research Hospital Psychiatry Clinic. The symptom severity of the patients was evaluated with the Positive and Negative Syndromes Scale (PANNS). The complete blood count and serum biochemistry parameters of the participants were evaluated with samples taken from the antecubital artery on the first day of hospitalization, between 07:00-09:00 am in the morning, after at least 8 hours of fasting. The data were compared between the two groups using appropriate statistical analyzes. Permission for the study was obtained from the Ethics Committee of Gülhane Training and Research Hospital (21.11.2018-18/280).

**RESULTS:** A statistically significant difference was found between age, creatinine, hemoglobin, hematocrit, PDW, eosinophil, MPV and RDW parameters of patients with first episode psychosis and chronic schizophrenia included in the study ( $p < 0.05$ ). However, contrary to the literature, no significant difference was found in neutrophil/lymphocyte ratios between patients with first episode psychosis and chronic schizophrenia.

**CONCLUSIONS:** The reason for the significant difference in creatine parameters is that renal function may be impaired in chronic schizophrenia patients due to the long duration of drug use. It can be suggested that low hemoglobin and hematocrit parameters in chronic schizophrenia patients may be due to nutritional deficiency. In addition, high PDW and RDW values in patients with chronic schizophrenia can be evaluated as a part of the neuroinflammatory process. Further studies are needed to clarify the neuroinflammation processes of patients with chronic schizophrenia and first episode psychosis.

**Keywords:** blood tests, chronic, first episode, schizophrenia

## SUBSTANCE USE IN PATIENTS WITH FIRST EPISODE PSYCHOSIS

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**BACKGROUND AND AIM:** This study aims to measure the frequency of substance use in patients with first-episode psychosis and investigate the relationship between substance use and sociodemographic and clinical characteristics.

**METHODS:** Patients hospitalized in Ondokuz Mayıs University Hospital Psychiatry Clinic between 1.1.2018 and 1.1.2022 for first-episode psychosis were evaluated for eligibility for the study. Retrospective file reviews of first-episode psychosis patients included in the study were conducted. Information collected included SU history, used antipsychotic medication, length of hospital stay and demographics. Data were then subjected to statistical analysis. Permission was taken from the institutional ethics committee (Ethics committee number: 2022000072-1).

**RESULTS:** A total of 30 patients (22 (73.3%) males; 8 (26.6%) females) aged 18–52 years (mean 26.6 years) met the inclusion criteria. 12 of 30 (40%) patients had a substance history, the most common substances used were cannabis (83.3 %). A significant association was found between substance use and age (Median value of age in substance users / non-substance users =20 / 28) male sex (substance users / non-substance users 100 % / 55.6 %), tobacco use (substance users / non-substance users 100 % / 50 %), length of hospital stay (Median value of length of hospital stay in substance users / non-substance users =31 / 17 day) ( $p<0.05$ ). Family history of psychosis was significantly higher in first-episode psychosis patients without substance use (substance users / non-substance users 8.3 % / 50 %) ( $p<0.05$ ).

The most preferred antipsychotic drug for treatment was olanzapine ( $n=13$ , 43.3 %), followed by risperidone ( $n=7$ , 23.3 %). A significant association was not found between groups.

**CONCLUSIONS:** In this study, substance use in first-episode psychosis patients was found to be low compared to the national and international literature. Nevertheless, the study's findings show that the frequency of substance use is high in patients with first-episode psychosis, emphasizing that mental health professionals should evaluate the dual diagnosis. Preventive strategies focused on substance use disorder can help reduce the frequency of psychotic disorders, especially in the younger population. Further prospective research is needed to confirm the higher prevalence of substance use reflected in this study.

**Keywords:** First episode psychosis, substance, psychosis

## EVALUATION OF CLOZAPINE PRESCRIPTION AT DISCHARGE FROM HOSPITAL

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**BACKGROUND AND AIM:** Although clozapine is an effective antipsychotic used in the treatment of psychotic disorders, especially in treatment-resistant patients, there is still a general reluctance among psychiatrists to prescribe clozapine due to its potentially lethal side effects. Nonetheless, there is an awareness among clinicians of its potential benefits, and its superiority to other antipsychotics for positive, negative, and impulsive symptoms, too. However, the characteristics of the patients that are prescribed clozapine is not studied enough. The aim of this retrospective study is to evaluate the clinical characteristics of the patients with psychotic disorders to whom clozapine was prescribed at discharge from hospital.

**METHODS:** The files of 400 inpatients with psychosis spectrum disorders who were treated in inpatient units of İstanbul Faculty of Medicine, Department of Psychiatry between 01.01.2014-01.07.2019 were screened. The last admission was recorded if the patient had more than one hospitalization. The variables including diagnosis, comorbidities, illness duration and course, past treatments, presence of involuntary admission, and substance/alcohol abuse between those who were prescribed clozapine and others were compared. The study received ethical approval from the Clinical Research Ethic Committee of the İstanbul Medical Faculty (2019/988).

**RESULTS:** The rate of the patients prescribed clozapine at discharge was 28,75%. There was no statistically significant difference in age and gender between those who were prescribed clozapine and those who were not. Patients with schizophrenia were more common compared to schizoaffective disorder, psychotic disorder not otherwise specified, schizophreniform disorder in clozapine group ( $p<0.001$ ). Those who were prescribed clozapine had lower age of onset ( $p<0.001$ ), and longer duration of psychotic disorder ( $p<0.001$ ). The rate of treatment resistance was 84,5% in those, while 20,1% in others ( $p<0.001$ ). 53,5% of the clozapine group had a previous history of clozapine use.

When patients who had never used clozapine before were selected for analysis ( $n=315$ ), it was again found that patients who were started on clozapine had a lower age of onset ( $p<0.001$ ), and longer duration of disorder ( $p=0.007$ ) than those who were not started on clozapine.

Clozapine group had more chronic course of the disorder than episodic course ( $p<0.001$ ), and higher number of previous hospitalizations (3,98 vs 2,55,  $p=0.002$ ). Past noncompliance to treatment ( $p=0.006$ ), past suicide attempts ( $p=0.037$ ); and past treatment with electroconvulsive therapy ( $p<0.001$ ), antipsychotic polypharmacy ( $p<0.001$ ), and long-acting injectable antipsychotics ( $p<0.001$ ) were more common in clozapine group. Involuntary admission ( $p=0.029$ ), and substance abuse ( $p=0.015$ ) rate was lower in this group. No relationship was found between clozapine prescription, and alcohol abuse and psychiatric comorbidity.

**CONCLUSIONS:** Our findings suggest that although they are resistant to treatment, it appears that clozapine is not preferred in some patients. Moreover, it is observed that clozapine was started in patients with early disease onset and long disease duration, although it is recommended to start earlier in the guidelines. It is thought that clozapine might be preferred in voluntary inpatients, and non-substance users since these patients would be more compatible with follow-ups to monitor side effects. There is a need for more studies investigating also cause-effect relationships in this field.

**Keywords:** clozapine, inpatients, schizophrenia

## META-ANALYSIS OF PUPIL SIZE MEASUREMENTS IN PSYCHOTIC DISORDERS

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**BACKGROUND AND AIM:** Since the eye is an extension of the nervous system and originates from the embryonic nervous system, retinal changes might reflect the changes in the brain in neuropsychiatric disorders. For example, the autonomic nervous system can be assessed easily, inexpensively and non-invasively with pupil diameter measurements. Pupillary diameter size (PDS) is controlled by the autonomic nervous system (ANS) and light exposure in physiological conditions. Dysfunction of the ANS and cognitive dysfunction may cause disturbance in the control of PDS in schizophrenia. However, the literature is mixed with conflicting results. It was aimed to perform a meta-analysis of the studies that measured PDS in psychotic disorders

**METHODS:** Pubmed database was scanned with the keywords “(Pupillae or pupil or pupillary) and (schizophrenia and schizophrenic or psychosis or psychotic)” in March, 2022. The literature search retrieved 126 items, 50 items remained after the first evaluations in titles and abstracts. 18 articles included PDS measurements with the standard method (infrared pupillometry) and 5 of the studies could be included after the evaluation according to the exclusion criteria. Random Effects Meta-analysis was performed. Standardized Mean Differences and % 95 confidence intervals were reported. Meta-regressions, Egger’s Test and Trim and Fill Tests were also performed. Analyses were conducted with the Excel software.

**RESULTS:** The meta-analysis found that there was no significant difference between psychotic patients and control subjects ( $P=0.653$ ). Although there were heterogeneity in the results ( $I^2=81.6\%$ ), no publication bias was detected ( $P=0.154$ ).

**CONCLUSIONS:** Autonomic responsivity decreases with age or accelerated aging process, understimulating social environment and chronicity of the disorder in schizophrenia. The load of the task is correlated with pupil size in healthy subjects but not in schizophrenia. Negative symptoms were associated with low pupillary reactivity, probably due to hypofrontality and neurocognitive dysfunction. Medications, nicotine, consumption, chronic stress, endocrine and inflammatory changes may influence the ANS functions in psychotic disorders

**Keywords:** autonomic nervous system, psychotic disorders, pupillae, schizophrenia

## THE EFFECTS OF COVID-19 PANDEMIC ON PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDER: A REPORT FROM A TERTIARY OUTPATIENT CLINIC

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**BACKGROUND AND AIM:** The aim of this study is to examine the difficulties faced by individuals with schizophrenia and bipolar disorder during the COVID-19 pandemic, including pandemic related fear and worries, disease course, and access to health care.

**METHODS:** The sample of this cross-sectional and observational study consisted of 200 patients followed regularly by Gazi University Medical Faculty Psychiatric Outpatient Clinic before the onset of the pandemic. Our medical records were screened to identify the patients who did not attend their routine appointments during the pandemic period. Patients who attended their routine appointments during the pandemic period (outpatient group) were compared to those who did not (phone group). Each group was comprised of 50 bipolar and 50 schizophrenia patients. Face-to-face interviews were conducted with the outpatient group, whereas phone interviews were conducted with the other group. This study performed between July-November 2020. Sociodemographic characteristics, current psychiatric and vegetative symptoms, treatment compliance, access to health care services, concerns about COVID-19, adherence to protective measures, social support, information resources for COVID-19, and knowledge and attitudes about telepsychiatry were all questioned using a semi-structured evaluation form completed by the interviewer. This study was approved by the Turkish Ministry of Health COVID-19 Scientific Research Evaluation Commission (06.07.2020 - 406) and local ethics committee (01.06.2020 - T14-37-57).

**RESULTS:** The concern of being infected with Covid-19 was the most important reason (72%) for not applying to a health institution and was significantly higher in patients interviewed by phone ( $p<0,001$ ). The symptoms associated with the COVID-19 were mostly anxiety (16%) and depression (15,5%) symptoms. The most common concerns were fear of themselves (59%) and their family members (39%) getting infected. One of the four patients experienced an exacerbation during the pandemic period, and the number of patients who discontinued medication was also quite similar (25.5 %). Patients with low social support ( $p<0,001$ ) and stopped taking their medications ( $p<0,001$ ) had more exacerbations. Also, patients who experienced exacerbations were mostly outpatients (62%,  $p=0,05$ ). The most common source of information about COVID-19 was retrieved from television (94%). Patients were observed to be largely adapted to the protective measures. Although the vast majority of patients (92.5 %) were unaware of telepsychiatry, 71% of the sample reported that they had a favorable attitude after being informed. Phone-interviewed patients were more motivated to use tele-psychiatry ( $p=0,001$ ) whereas patients with schizophrenia ( $p=0,005$ ) or delusional symptoms were less willing ( $p=0,01$ ).

**CONCLUSIONS:** Disruption in the treatment and follow-up of psychiatric patients during the pandemic is an important mental health care problem. Our findings suggest that specific treatment and follow-up methods for different patient groups should be developed for the prevention and early intervention of potential mental health problems in future crisis periods.

**Keywords:** COVID-19, schizophrenia, bipolar disorder, telepsychiatry

## SEVERAL NEUROPSYCHIATRIC AND BIOCHEMICAL MEASUREMENTS AS ENDOPHENOTYPES FOR SCHIZOPHRENIA

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**BACKGROUND AND AIM:** Endophenotypes as markers of the underlying genetic predisposition can serve for the detection of high risk of diseases including psychosis. Endophenotypes are quantitative laboratory based measures, and markers of genetic predisposition more than the disease itself. Various endophenotype candidates have been studied with clinical, epidemiological, genetic, neurobiological, electrophysiological studies. Social cognition impairment has been reported to be common in schizophrenia and psychotic disorders. Furthermore, the fact that social cognition was impaired in unaffected relatives of schizophrenia patients. These results suggests that this impairment may be a characteristic feature of schizophrenia, and a possible endophenotype.

Oxidative stress has been reported as a risk factor in schizophrenia. However, it is not clear whether oxidative stress can be accepted as an endophenotype.

The aim of this study is to explore the social cognition and oxidative stress parameters as a candidate endophenotype for schizophrenia.

**METHODS:** 26 schizophrenia patients(PG) in remission, 25 first-degree relatives (of patients with schizophrenia)(RG) and, 36 healthy controls(HC) were compared in terms of Serum levels of Nitric Oxide(NO), Glutathione Peroxidase(GPx), Catalase(CAT), Superoxide Dismutase(Sod-U), Total Glutathione(Glu), and Malondialdehyde(MDA) were compared. In addition, Reading the Mind in the Eyes Test for social cognition, n-back test for working memory, and Raven Standart Progressive Matrices(RSPM) Test for general intellectual ability was performed. In addition, some clinical and sociodemographic information was obtained.

Permissions were obtained from Ankara University Clinical Research Ethics Committee for the study (25.03.2019, with the decision numbered 06-479-19). Signed informed consent forms were obtained from all participants. This work was supported by the Ankara University Scientific Research and Project unit, with project number 20L0230004.

**RESULTS:** There is no significant difference was found between the all off groups in terms of age, gender, duration of education, BMI, and smoking history. Considering the effect of these factors on oxidative stress parameters and social cognition this is an important advantage for our study. HC had statistically significantly lower scores than PG and RG in terms of Gpx (respectively  $p=0.000$ ,  $p=0.000$ ). GpX levels were significantly higher in schizophrenia patients and relatives compared to control subjects. In addition, HC had statistically significantly higher scores than PG and RG in terms of Eyes Test (respectively  $p=0.000$ ,  $p=0.014$ ), but after controlling for the effect of RSPM and n-back

scores, the statistically significant effect on Eyes Test scores between groups disappeared ( $p=0.057$ ),but this value tends to be significant.

**CONCLUSIONS:** Lower levels of antioxidant levels in patients with schizophrenia was reported in previous studies. One reason for the different results that the normalization or increase of antioxidant enzymes may be related compensatory mechanisms as reported in another study. Another reason may be that we chose the participants from patients who received regular long-term treatment. However, we think that this difference may be an indicator of genetic sensitivity, Because, we found increased enzyme activity in relatives who did not receive any treatment, and there is no correlation between the chlorpromazine equivalent dose and GPX levels.

Finally we concluded that GPx level, Eyes Test score can be used as endophenotypes.

**Keywords:** endophenotype, oxidative stress, schizophrenia, social cognition,

## EVALUATION OF QUALITY OF LIFE AND ITS RELATIONSHIP WITH DISCRIMINATION IN BDSM PRACTITIONERS IN TURKEY: A CONTROLLED STUDY

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**BACKGROUND AND AIM:** BDSM is an acronym for “bondage-discipline, dominance-submission, sadism, masochism”. It is hard to determine an exact definition of BDSM, but it often includes sexual behaviour involving some type of exchange of power between partners and/or the use of pain for sexual pleasure. Many sexual health researchers object to the inclusion of BDSM practices in medical diagnostic guidelines because they stigmatize BDSM practitioners and medicalize relatively common sexual interests.

BDSM practitioners may seek psychiatric support for both BDSM-related and different mental problems, but most healthcare professionals are not familiar with these practices. It is known that stigma has a negative effect on the quality of life (QOL). Although the frequency of those who state that they have practiced BDSM at least once in their life is around 50%, it is seen that there are prejudices and a lack of knowledge among health authorities regarding this issue. One of the critical consequences of this situation is the possibility of significantly affecting people's QOL due to their sexual practices. This study aims to evaluate whether there is a difference in the QOL between those who define themselves as BDSM practitioners and the general population. We also aim to examine the effects of being discriminated against due to sexual practices on the QOL in BDSM practitioners.

**METHODS:** 141 people (65 women, 76 men) aged 18 and over who defined themselves as BDSM practitioners were included in the study with the snowball technique through websites that are accessible on the internet and BDSM groups in social networks. The study was carried out with the Google forms application, which was sent individually to those who agreed to participate in the research via the internet. To reach the control group, another form was prepared (which only excludes questions about BDSM practices) and was placed on two popular national websites. 167 volunteer participants (88 women, 79 men) who stated that they were not BDSM practitioners and filled out the form completely were taken as the control group.

The data form of our study includes the sociodemographic information of the participants, their level of knowledge about sexual health, the discrimination they experience while seeking medical/psychological help, and the World Health Organization Quality of Life Scale - Short Form (WHOQOL - BREF). WHOQOL – BREF measures general, physical, mental, social, and environmental well-being and consists of 26 questions. Each area, independently of each other, shows the quality of life as a percentage value.

Ethics committee approval was obtained for the study by Acibadem Mehmet Ali Aydınlar University Medical Research Evaluation Committee on 21.04.2021 with the number 2021/08. Data were collected between 01.05.2021 and 31.07.2021.

**RESULTS:** The mean age of the BDSM group (n = 141) was 31.04 (standard deviation [SD], 5.171). 46.1% (n = 65) of the BDSM practitioners participating in our study were female and 53.9% (n = 76) were male. Considering their sexual orientation, 60.3% (n = 85)

defined them as heterosexual, 27% (n = 38) as homosexual, and 12.7% (n = 18) as bisexual. Sociodemographic data of BDSM practitioners and the control group are given in Table 1. The prevalence of a psychiatric disorder in the BDSM group was 20.6% (n = 29), and a history of suicide was 17% (n = 24), while these results did not show a significant difference compared to the control group. 54.6% (n = 77) of the participants and 8.4% (n = 14) of the control group stated that they had been discriminated against in the past while receiving medical/psychological help because of their sexual practices (p < 0.001). In addition, 62.4% of the participants (n = 88) and 15.6% of the control group (n = 26) stated that they avoided seeking medical/psychological help in the past because of their fear of being discriminated against due to their sexual practices.

When the WHOQOL – BREF scores of BDSM practitioners and the control group were compared, the overall QOL in BDSM practitioners was 57.358 (s.d. 18.484), physical QOL was 46.96 (s.d. 11,317), psychological QOL was 52.009 (s.d. 12,317), social QOL was 64,007 (s.d. 17,318), environmental QOL was found to be 48,847 (s.d. 17,524). Physical, psychological, and environmental quality of life scores were significantly lower than the control group (p < 0.001). The comparison of BDSM practitioners and the control group in terms of WHOQOL – BREF scores are given in Table 2. Among BDSM practitioners, the QOL scores of those who stated that they were discriminated against in the medical environment were found to be significantly lower in all sub-categories (general, physical, psychological, social, and environmental) than those who did not experience discrimination (p < 0.05).

**CONCLUSIONS:** The most important result of our study is that the QOL in BDSM practitioners is lower than the general population in terms of physical, psychological, and environmental aspects. In the discriminated group, it is observed that there is a significant decrease in the quality of life in all sub-categories.

The National Coalition for Sexual Freedom stated that 11.3% of kink-identified individuals were discriminated against by a professional or service provider, and 48.8% of those who practiced discrimination were medical doctors. Although they do not differ from the general population in terms of psychiatric and physical diseases, their lower QOL on both physical and psychological aspects may be due to their fear of discrimination. Since the BDSM community is in a more vulnerable position in terms of physical and mental health as a sexual minority, it is important that they can easily apply to health professionals in this regard. The fact that social QOL values did not differ with the control group suggests that the BDSM group has a strong social bond within itself, but fear of being discriminated against affects individuals when they are in the general society.

In order to improve the QOL of BDSM practitioners, it is important to reduce discrimination against these people. It may be beneficial to give importance to education on this subject in medical and psychological settings and to carry out further studies on the BDSM community in Turkey.

**Keywords:** BDSM, Quality of Life, Sexual Health, Sexual Minorities, Stigmatization

## DELAYED MID-SLEEP TIME ASSOCIATED WITH WEIGHT GAIN WHILE CONTROLLING FOR EATING BEHAVIORS AND ADHD SYMPTOMS IN YOUNG FEMALES DURING THE COVID-19 PANDEMIC

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**BACKGROUND AND AIM:** Society's sleep-wake cycle and eating behaviors have altered as the psychological outcomes of the COVID-19 pandemic. The aim is to examine the relationship between sleep-wake rhythms, eating behaviors (dieting, oral control, and bulimic behaviors) and ADHD symptoms with weight gain during the COVID-19 pandemic.

**METHODS:** Participants were 578 female university students who completed a test battery that included a sociodemographic form as well as the Adult ADHD Severity Rating Scale, Wender Utah Rating Scale, Eating Attitudes Test, and Pittsburg Sleep Quality Index. Participants were divided into three groups based on weight change during COVID-19 as who lost weight (WL), whose weight not change (nWC), and who gain weight (WG). Descriptive statistical analysis was performed with the Statistical Package for the Social Sciences (SPSS). The study protocol was approved by the Local Ethics Committee of Selçuk University and the number of decision was 2021/369.

**RESULTS:** Participants' ages ranged from 17 to 37 (mean of  $21.65 \pm 3.12$ ), and mean body mass index was  $21.92 \pm 3.63$ . Bed time ( $F = 4.28$ ;  $p = 0.014$ ), wake time ( $F = 6.52$ ;  $p = 0.002$ ), mid-sleep time ( $F = 6.41$ ;  $p = 0.002$ ) were delayed in WGs compared to the other two groups. The bulimic behavior score ( $F = 4.59$ ;  $p = 0.011$ ) was higher and the oral control behavior score ( $F = 9.70$ ;  $p < 0.001$ ) was lower in the WG group than in the nWC group. A hierarchical regression analysis models in which weight change scores were dependent variables showed that mid-sleep time in second step ( $\beta = 4.71$ ,  $t = 2.18$ ,  $p = 0.03$ ), and oral control ( $\beta = -0.11$ ,  $t = -3.24$ ,  $p = 0.001$ ) / bulimic behaviors ( $\beta = 0.20$ ,  $t = 3.20$ ,  $p = 0.001$ ) in third step were associated with weight gain after controlling for both current and childhood ADHD symptoms.

**CONCLUSIONS:** Chronotherapeutic approaches that regulate sleep-wake rhythm may facilitate weight control of individuals during stressful periods such as COVID-19 pandemic.

**Keywords:** ADHD, eating behaviors, COVID-19, mid-sleep time, weight gain

## THE EFFECT OF PANDEMIC RESTRICTIONS ON PSYCHIATRIC EMERGENCY ADMISSIONS

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**BACKGROUND AND AIM:** The COVID-19 pandemic has caused a major health challenge worldwide, affecting not only physical health but also mental health and well-being. As in previous pandemics, problems such as depression, panic, fear, anxiety, stress, trauma, and adjustment disorder have been reported in the society. Pandemic is a situation that disrupts the daily routines of patients with mental disorders, disturbs their social bonds and also increases their financial worries. Quarantine period, fear of infection, irritability and boredom, insufficient supplies and information were reported to be among the quarantine stressors.

This study aimed to compare the sociodemographic, diagnostic and outcome data of the patients who applied to Ege University Emergency Service and consulted by a psychiatrist during the restriction days between 11th March and 1st June 2020; with the applications from the same dates of year 2019 and 2018.

**METHODS:** Data were collected retrospectively from the hospital's digital database. All the adult emergency patients consulted by psychiatry department on the particular date intervals were included. Sociodemographic data, clinical presentation, diagnosis and clinical outcome data were collected. Retrospective data were collected from 11 March 2020 to the first normalization period occurred on 1 June 2020, the dates of curfew restrictions were further analysed; all data were compared with the same dates of previous year (2019) and the year before (2018) to examine whether there are curfew restrictions related changes or not. This study was performed in line with the principles of the Declaration of Helsinki and was approved both by the local ethics committee (Approval Number: 21-6.1T/76) and The Ministry of Health COVID-19 Scientific Research Oversight Committee.

**RESULTS:** In total 980 patients records were screened. Due to missing data, 74 patients were excluded. From the 906 patients in total, 341 (37,6%) applied in year 2018, 307 (33,9%) applied in year 2019 and 258 (28,5%) applied in 2020, the first year of the pandemic.

Compared to the pre-pandemic period, we found that there was a statistically significant decrease in applications due to suicidal thoughts ( $p = 0.021$ ), suicide attempts ( $p = 0.004$ ) and psychosis ( $p = 0.018$ ), but a statistically significant increase was observed for applications due to psychomotor agitation ( $p < 0.05$ ). When only the dates of curfew restrictions were compared to non-restricted days in 2020; we found statistically significant difference between presentations with suicidal thoughts and psychomotor agitation.

**CONCLUSIONS:** We found significant changes of psychiatric emergency presentations during the pandemic when compared to the previous two years.

**Keywords:** Pandemic, psychiatric emergency, curfew restrictions

## INVESTIGATION OF QTc INTERVAL CHANGE IN PATIENTS WITH SEVERE MENTAL DISORDER AND COVID-19

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**BACKGROUND AND AIM:** Neuroleptic drugs used in patients with severe mental disorders may cause serious cardiac events by prolonging the QTc (corrected QT) interval in electrocardiogram (ECG). It has been reported that drugs such as hydroxychloroquine, azithromycin, and favipiravir used in the treatment of COVID-19 can prolong the QTc interval in ECG and pose a risk for sudden cardiac death. Although hydroxychloroquine, azithromycin and others, excluding favipiravir, are no longer widely used in the treatment of COVID-19, some concerns have been raised in the community due to the possibility of cardiac side effects during the early times of the pandemic when they were used. Our study aims to investigate possible drug interactions and QTc interval changes in cases using neuroleptic drugs and anti-COVID-19 drugs, both of which are on the agenda with cardiac side effects simultaneously.

**METHODS:** Our study included 33 patients who were hospitalized for severe mental disorders in the COVID-19 specific psychiatry service. QTc intervals were calculated in the ECGs of the patients on Day 0 and Day 7. A second ECG measurement was made to 21 people and 12 people were excluded from the analysis after the second set of measurements. In continuous variables, normally distributed ones were reported as mean standard deviation and non-normally distributed ones as median and interquartile ranges. Categorical variables were reported as frequency numbers and percentages. Change levels in the week 0 and 1 were measured with the ANOVA test in repeated measurements. In the ANOVA models, drugs were included in the analysis as a constant variable, age and CALL (comorbidity, age, lymphocyte, lactate dehydrogenase) scores as co-variants (Ethics committee decision number: 2020.08.180).

**RESULTS:** While the mean age of the study sample was 44.7 ± 13.0, 23 of the 33 subjects were males. 17 patients were treated with hydroxychloroquine, 1 patient with azithromycin, and 5 patients with favipiravir. When the effects on the change in QTc interval were examined in the results of our study, the effects of favipiravir were found to be significant, while the effects of age, CALL score, hydroxychloroquine, and azithromycin were not found to be significant. (Hydroxychloroquine: F=0.7, p=0.412, age: F= 0.3, p=0.582, CALL score: F=1.2, p=0.291, Favipiravir: F= 11.7, p=0.003).

**CONCLUSIONS:** Our study suggests that the drugs used for treating COVID-19 except for favipiravir are cardiac safe when used with neuroleptics. On the other hand, multicenter studies with a larger sample are required.

**Keywords:** COVID-19, Mental Disorder, Neuroleptics

## FACTORS PREDICTING MOTIVATION TO STUDY ABROAD IN MEDICAL STUDENTS

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**BACKGROUND AND AIM:** We aimed to examine the frequency of plans to practice medicine abroad in medical school students and the related variables.

**METHODS:** A total of 82 volunteer students in the 5th and 6th grades of Mersin University, Faculty of Medicine in the study. A questionnaire was directed to the participants about sociodemographic data, attitudes towards the medical profession, the reasons that make it difficult to practice medicine in our country, the idea of working abroad, and the attractive features of abroad opportunities for students. In addition, the World Health Organization Quality-of-Life Scale (WHOQOL-BREF) to measure the quality of life of the students and the Perceived Stress Scale-14(PSS-14) to measure the stress level were applied. Ethics committee approval of the study was obtained from Mersin University Social and Human Sciences Ethics Committee (30.03.2022, Decision No: 157).

**RESULTS:** 56% of the students were female (n=46), 44% (n=39) were male, and the mean age was 24.07 ±1.65. The following answers were frequently given to the question of the most important reasons that make it difficult to practice the profession of medicine in our country: Heavy working conditions and long working hours (90%), verbal/physical violence against physicians (87%), mobbing and pressure applied by seniors/administrators in the workplace. (67%). Majority of the students (94%, n=77) stated that they thought of doing medicine abroad, and nearly half of them (46%, n=38) stated that they were determined on this issue. The answers given to the question of what are the most important reasons for students to consider practicing medicine abroad were as follows: Comfortable working conditions (89%), lifestyle and high living standards (77%), comprehensive laws and measures to protect physicians (71%). The countries respondents considered to immigrate frequently were: Germany, UK and USA. The average quality of life total score of the participants was 48%. The average field scores of the participants in the study on quality of life are as follows: General health 47%, Physical health 47%, Psychological 55%, Social relations 61%, Environment 50%. Total quality of life score of those who intend to practice medicine abroad (t(41)=-2.58, p=0.013), General health status (t(41)=-2.26, p=0.032), Physical health (t(41)=-2.13, p=0.039) and Perimeter scores (t(41)=-2.40, p=0.021); It was significantly lower than those who did not intend to practice medicine abroad (p<0.05). The mean PSS-14 score of the participants was found to be 1.98 ± 0.49, and there was no significant difference between those who thought to practice medicine abroad and those who did not. In the Pearson correlation test, it was determined that there was a significant and negative correlation between the WHOQOL-BREF and PSS-14 scores (r=-0.620, p<0.05).

**CONCLUSIONS:** The results show that most medical students have the thought of working abroad as physicians. Low quality of life leads to an increase in brain drain plans. Special attention should be given to the problems of physicians and medical students regarding the brain drain of physicians, which causes the loss of qualified workforce in our country and has been increasing in recent years, and solution-oriented interventions should be implemented rapidly.

**Keywords:** Medical students, study abroad, quality of life

## PSYCHIATRIC ADMISSIONS TO THE GENERAL HOSPITAL EMERGENCY DEPARTMENT: BEFORE AND AFTER THE COVID-19 PANDEMIC

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**BACKGROUND AND AIM:** The COVID-19 pandemic is a major public health problem affecting the whole world. With the onset of the pandemic in the world in December 2019 and in our country in March 2020, restrictions in social areas, measures such as masks, distance, and quarantine practices have led to significant changes in lifestyle. Along with the increase in the number of cases, changes in the admissions of patients to the emergency department have been demonstrated in many studies. Therefore, changes were observed in the patient population who applied to the emergency department with psychiatric complaints after COVID-19. In this study, our aim is to compare patients who applied to the general hospital emergency department for psychiatric reasons before and after the pandemic in terms of their sociodemographic and clinical characteristics.

**METHODS:** Study data, designed as an observational retrospective, were obtained from the hospital database. Between 01.07.2019-11.03.2020 before the pandemic and between 01.07.2020 and 11.03.2021 after the pandemic, 363 adult patients over 18 years old age are compared in terms of gender, marital status, occupation, reason for application, psychiatric diagnosis before admission and psychiatric drug use before admission. Ethics committee approval was obtained from the ethics committee of Istanbul Medeniyet University Faculty of Medicine on 09.08.2021 with the decision number 2021/0398. It complied with the Declaration of Helsinki.

**RESULTS:** Out of 363 cases, 212 patients, proportionally 58% of the total evaluated cases, applied before the COVID-19 pandemic. The post-pandemic period has less admission from females than pre-pandemic in terms of ratios, which are 57% and 60% respectively. When the existing psychiatric diagnoses of the patients before the admission were examined, a statistically significant difference was found in the number of admissions before and after the pandemic of the patients followed up with psychotic disorders. ( $p < 0.005$ ). While there is no significant difference in the number of admissions based on suicide attempts, manic episodes, alcohol substances use, delirium/agitation, and other reasons between before and after the pandemic, it is observed that the admission number increased apparently due to the psychotic attacks in the post-pandemic period. While the number of patients presenting with a suicide attempt was 138 (65%) before the pandemic, it was 104 (69%) after the pandemic. The post-pandemic admissions of those who had a known diagnosis of psychotic disorder and no diagnosis before admission were significantly higher than before.

**CONCLUSIONS:** There is no significant difference in terms of age and gender in psychiatric admissions to the general hospital emergency service in the post-pandemic period and the pre-pandemic period. However, there are differences with regard to admission reasons and diagnoses. This shows the need to increase the quality of the psychiatric service offered and to support the service provider professionals due to the necessity of evaluating psychiatric patients carefully during pandemic periods and the possibility of encountering more serious/severe conditions.

**Keywords:** COVID-19, Emergency Department, Psychiatric Admission

## NURSES' JOB SATISFACTION DURING COVID-19 PANDEMIC

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**BACKGROUND AND AIM:** The COVID-19 pandemic threatens not only physical health but also mental health. In many countries, the presence of factors such as intensive care units, inadequacy of respirators and personal protective equipment, increasing patient load, and the threat of risking their own life in the fight against a disease with high mortality make the mental health of healthcare workers vulnerable to vulnerability during the pandemic process. The purpose of this research is to show the relationship between the difficulties faced by nurses involved in the COVID-19 pandemic and their professional satisfaction and the connection with the support they perceived in this period.

**METHODS:** This study was designed as a cross-sectional online survey study. The survey link was posted on various social media platforms. In the collection of data, snowball sampling method was applied with an online survey. 335 nurses participated in the study, and the participants were received the Minnesota Job Satisfaction Scale and Perceived Organizational Support Scale, after the questions including sociodemographic characteristics. Parametric tests, Pearson Correlation analysis and linear regression analysis were used in the analysis of the data, as well as descriptive statistics. This study was approved by the Gazi University Ethics Committee to comply with the Declaration of Helsinki. (2020/384)

**RESULTS:** The mean age of the participants participating in the study was  $30.53 \pm 7.99$  years, and 87.8% of the participants were women. The mean job satisfaction of nurses was found to be  $2.93 \pm 0.82$ . According to the independent sample t-test results, the mean of job satisfaction was significantly higher in female individuals ( $t = 0.125$ ;  $p = 0.021$ ); Nurses who received appreciation in the hospital they worked in during the pandemic ( $t = 0.86$ ;  $p = 0.00$ ), nurses whose departments did not change during the pandemic ( $t = 1.301$ ;  $p = 0.007$ ), and nurses who worked less than 8 hours in day ( $t = 2.839$ ;  $p = 0.00$ ), and nurses who received additional payment was found to be higher job satisfaction ( $t = 2.866$ ;  $p = 0.004$ ). According to one-way analysis of variance and post hoc tests, nurses with more than 10 years of experience compared to less experienced nurses ( $f = 3.986$ ;  $p = 0.008$ ); Nurses working in 3rd level hospitals compared to nurses working in 1st and 2nd level hospitals ( $f = 8.789$ ;  $p = 0.00$ ), nurses working in managerial positions before the pandemic compared to service, intensive care and emergency nurses ( $f = 3.453$ ,  $p = 0.005$ ) significantly higher job satisfaction. According to Pearson correlation analysis, there was a significant positive relationship between perceived organizational support and job satisfaction. ( $r = 0.712$ ;  $p < 0.001$ ). Linear regression analysis showed that perceived organizational support on nurses' job satisfaction was positive effect ( $\beta = 0.705$ ;  $p = 0.00$ ); while department change had a negative effect ( $\beta = -0.102$ ;  $p = 0.008$ ) during the pandemic

**CONCLUSIONS:** job satisfaction of nurses is affected by gender, experience, working hours, and the characteristics of the institution they work in. The predictive effect of perceived support on job satisfaction was observed. For these reasons, psychosocial and economic intervention strategies are necessary to increase job satisfaction in nurses.

**Keywords:** COVID-19, job satisfaction, social support

## INVESTIGATION OF THE RELATIONSHIP BETWEEN INTERNALIZED WEIGHT BIAS, EMOTION REGULATION, AND TREATMENT OUTCOMES IN THE POST-OBESITY SURGERY PERIOD: PRELIMINARY RESULTS

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**BACKGROUND AND AIM:** Obesity has gained more attention as a public health concern worldwide. It is associated with impaired mental health as well as elevated risk or morbidity and mortality. Obese individuals can be subject to discrimination and stigmatization. Internalized weight bias (IWB) refers to negative attitudes towards an individual because of being overweight or obese. Emotion regulation (ER) could be a key variable for determining post-operative outcomes and IWB of obese individuals. The aim of this study to examine the relationship between IWB and the ability to achieve the targeted weight loss rate before the surgery. The effect of ER and eating attitudes in the post-operative period will also be evaluated.

**METHODS:** Twenty-nine patients who had undergone sleeve gastrectomy/gastric bypass surgery from April 2021 to June 2021 were included in this study. Patients were evaluated using sociodemographic data form, the weight bias internalization scale, the Rosenberg self-esteem scale, the difficulties in emotion regulation scale, the 3-factor eating questionnaire and the Beck anxiety and depression inventory were used, 18-36 months after the surgery. The ethical approval was obtained from the ethics committee of Diskapi Yildirim Beyazit Training and Research Hospital (with the decision numbered 106/21 and dated March 8th, 2021).

**RESULTS:** Participants (mean age=38,1), were mostly female (%75,9). The average WBIS score was 3. WBIS scores were not associated with emotion regulation strategies. WBIS scores were positively associated with anxiety symptoms ( $p < 0.05$ ). Also WBIS scores were not associated with better treatment outcomes.

**CONCLUSIONS:** As far as is known, our study is the first study which examines the relationship between ER and IWB in a Turkish sample. These preliminary results of the study will be valuable for demonstrating the relationship between ER and IWB.

**Keywords:** obesity, emotion regulation, weight bias, weight stigmas

## THE RELATIONSHIP BETWEEN PSYCHOLOGICAL FLEXIBILITY AND EMOTIONAL EATING IN TURKISH YOUNG ADULTS

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**BACKGROUND AND AIM:** This cross-sectional study aimed to explore the predictive association of psychological flexibility on emotional eating, one of the risk factors for binge eating, weight gain, and obesity.

**METHODS:** After the Authorized Ethics Committee for Humanities Research approved the study protocol (IRB number and date: 050.01.01-270183, 30.12.2021), the data was collected via demographic information form, The Acceptance and Action Questionnaire (AAQ-II), The Positive and Negative Affect Schedule (PANAS), and The Emotional Eating Scale. The study sample consisted of 138 young adults with an average age of 20.61 (sd = 1.96, ranging from 18 to 34).

**RESULTS:** A linear regression analysis with the enter method was conducted to test the association of psychological flexibility with emotional eating. In the first step, age, gender, and body mass index; in the second step, positive and negative affect; in the last step, psychological flexibility were entered into the equation. The results of linear regression analysis showed that the overall model was significant,  $F(6, 132) = 9.81$ ,  $R^2 = .31$ ,  $p < .001$ . After age [ $\beta = .09$ ,  $t(135) = 1.17$ ,  $p = .244$ ,  $\eta^2 = .10$ ], gender [ $\beta = -.31$ ,  $t(135) = -3.83$ ,  $p < .001$ ,  $\eta^2 = .31$ ], body mass index [ $\beta = .46$ ,  $t(135) = 5.76$ ,  $p < .001$ ,  $\eta^2 = .44$ ], and positive [ $\beta = -.01$ ,  $t(133) = -.08$ ,  $p = .939$ ,  $\eta^2 = .01$ ] and negative affect [ $\beta = .23$ ,  $t(133) = 3.16$ ,  $p = .002$ ,  $\eta^2 = .26$ ] had been controlled, psychological flexibility significantly predicted emotional eating,  $\beta = -.20$ ,  $t(132) = -2.42$ ,  $p = .017$ ,  $\eta^2 = .21$ . To state more precisely, as psychological flexibility increased, the tendency to engage in emotional eating decreased.

**CONCLUSIONS:** Thus, the findings suggest that assessing psychological flexibility and using psychological flexibility-based interventions (e.g., Acceptance and Commitment Therapy) might be viable in preventing and treating emotional eating.

**Keywords:** Emotional eating, psychological flexibility, positive and negative affect

## EVOLUTION OF CHILDHOOD OBESITY, TRIGGERS OF OBESITY AND EATING PATTERNS IN BARIATRIC SURGERY CANDIDATES

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**BACKGROUND AND AIM:** The aim of this study is determining the properties of disordered eating and childhood obesity in a group of bariatric surgery candidates (BSC).

**METHODS:** The sample included 69 female and 16 male bariatric surgery candidates admitted to Haydarpaşa Numune Training and Research Hospital. All BSCs were examined by general surgeon, dietitian and endocrinologist before psychiatrist. Inclusion criteria were being super-obese patients [body mass index (BMI) >50 kg/m<sup>2</sup>], morbidly obese (BMI >40 kg/m<sup>2</sup>) or severe obese patients (BMI 35-40 kg/m<sup>2</sup>) with at least one co-morbid medical status. Exclusion criteria were being under the age of 18 years or older than 60 years, illiteracy, being visually handicapped, diagnosis of psychosis, mental retardation, story of neurologic diseases for example dementia or the presence of any condition affecting the ability to complete the assessment. BSCs were evaluated by pre-surgical psychiatric interview. Data collected with help of sociodemographic form, body mass index(BMI), eating attitude test and night eating questionnaire (NEQ).

The study is approved by Ethics Committee of Zeynep Kamil Women and Children Diseases Training and Research Hospital (27.06.2018-desicion number: 106).The research was conducted in accordance with the Helsinki Declaration as revised in 1989.

**RESULTS:** Groups consisted from 40 (33 female, 7 male) bariatric surgery candidates with childhood obesity and 45 (36 female, 9 male) bariatric surgery candidates without childhood obesity. BSCs with childhood obesity were younger than BSCs without childhood obesity (33.6±9.1 vs 41.8±7.7 years, p=0.000). There was a statistical difference in marital status between two groups(p= 0.012).

Rate of psychiatric history was statistically higher in BSCs without childhood obesity (60.0% vs 32.5%, p=0.011). Rate of eating disorders history was 37.5% in BSCs with childhood obesity and 42.2% in BSCs without childhood obesity (p=0.657). 49.4% of total 85 bariatric surgery candidates (n=42) defined any kind of trigger factor. Rate of trigger for obesity occurrence was statistically higher in BSCs without childhood obesity (60.0% vs 37.5%, p=0.038).

Rate of comorbid medical states was statistically higher in BSCs without childhood obesity (84.4% vs 52.5%, p=0.001).Rate of type 2 DM was statistically higher in BSCs without childhood obesity (57.8% vs 30.0%, p=0.010).

Rate of treatment for comorbid medical states was statistically higher in BSCs without childhood obesity (75.6% vs 50.0%, p=0.015).

No statistical difference found between groups in distribution of eating disorders (p=0.268).No difference was found between groups in EAT scores (BSCs with childhood obesity and BSCs without childhood obesity, respectively, 24,7±8,3, 23,3±8,2 p=0.427)

**CONCLUSIONS:** The major results of the study were higher rates of comorbid medical diseases, medical treatment and psychiatric disorder story in BSC without childhood obesity group. These data were interpreted as unexpected results. When other results in the study were reviewed, it was noticed that BSCs without childhood obesity were older than BSCs with childhood obesity in study group. Generally elderhood brings along some risks about chronicle medical diseases(especially type 2 diabetes mellitus) and psychiatric disorders. The associations of both obesity and several age related diseases remain poorly understood.

**Keywords:** bariatric surgery, childhood, eating disorder, eating pattern, trigger factor, obesity



# POSTER PRESENTATIONS



PB-001

## FACTITIOUS DISORDER IN AN ADOLESCENT WITH TYPE-2 DIABETES MELLITUS PRESENTING WITH UNEXPLAINED HYPOGLYCEMIA: A CASE REPORT

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**OBJECTIVE:** Factitious disorder (FD) is a mental disorder that can cause serious morbidity and mortality and concerns not only psychiatry, but many different clinical fields as well. Our aim, thus, was to contribute to the literature by discussing a case of factitious disorder which presented with unexplained hypoglycemia and the treatment of said patient. The written informed consent was obtained from the patient.

**CASE:** B.Y., an 18-year-old female patient, was consulted with psychiatry after admission to dermatology outpatient clinic with unexplained recurrent lesions on her skin, which are thought to be of psychogenic origin by the dermatologist. She had a history of type-2 diabetes mellitus and Hashimoto's thyroiditis, both diagnosed 8 years ago. Patient's anamnesis revealed 13 separate hospitalizations in different hospitals during the 8-year follow-up period. In first examination, sertraline was started at 50 mg/d because of her depressive symptoms. Periodical control examinations were recommended, but the patient didn't comply. Seven months after the initial examination, the patient was hospitalized for regulation of blood glucose levels, but briefly after the admission a seizure was noticed, and the blood glucose level which was obtained during the seizure was 15 mg/dL. The biochemical analysis revealed increased insulin and cortisol levels (insulin >300 mIU/L, cortisol = 15,6 µg/dL) with a low c-peptide level (0,08 ng/mL). Neuroimaging tests and neurological assessment were normal. The patient was consulted with psychiatry with assumed factitious disorder. Psychiatric examination revealed that she didn't use her sertraline treatment and had been struggling with some stressful life events (divorced parents, her father's second marriage, living with her stepmother). She followed her appointments regularly after discharge however, she didn't use sertraline treatment. During the three-year follow-up period, she had been admitted to different hospitals for treatment of irregular blood glucose levels and hypoglycemia attacks. Additionally, it was learned that insulinoma was suspected as the etiology of persisting hypoglycemia attacks but was ruled out. Recurrent and unexplained episodes of hypoglycemia in the patient were thought to be a manifestation of FD; the patient's psychotherapy treatment continues at outpatient clinic. She has been using an insulin pump for 18 months and the number of her hypoglycemia attacks decreased significantly. Psychotherapy sessions with the patient is focused on psychoeducation and problem focused coping strategies.

**DISCUSSION:** FD secondary to exogenous insulin use can be suspected when blood insulin level is increased and c-peptide level is decreased and when available with the presence of anti-insulin antibodies at plasma. Atypical and resistant symptoms during a chronic disease, should raise the suspicion for possible FD. Female gender, history of multiple hospital admissions and repeated invasive or non-invasive medical procedures, an extensive medical record, non-compliance to

the treatments, presence of resistant symptoms are found to be related to FD in the literature, and these features are also seen in the presented case. It is difficult to diagnose FD; it is mostly diagnosed when all other possible medical conditions are excluded. A multidisciplinary approach, careful documentation of medical history, and involvement of patients to their treatment processes are required for effective diagnosis and treatment.

**Keywords:** diabetes mellitus, factitious hypoglycemia, Munchausen syndrome

## FAHR SYNDROME WITH ACUTE MANIA: A CASE REPORT

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**OBJECTIVE:** Fahr Disease/Syndrome (FS) is a rare disease characterized by neuropsychiatric symptoms. Although mostly presenting with neurological symptoms (especially movement disorders), it was stated that approximately 40% of the cases first showed psychiatric symptoms. In our case, a 32-year-old male patient with hypocalcemia had applied to psychiatry department presenting acute mania symptoms without any neurological findings. Case report's main objective is to show that FS can present with pure psychiatric symptoms and accompanying calcium metabolism disorders without neurological findings.

**CASE:** 32-year-old male patient applied to our clinic to clarify the etiology of the five-day period of insomnia, high anxiety, restlessness, irritability, and aggression which happened for the first time. During this period, he had persecutory delusions and physical violence behaviors. He suddenly left the house with high anxiety, he walked about 70 km in his slippers and pyjamas. When he applied, he had been using 2 mg/day risperidone regularly for one month, which was started in another center. His agitation had subsided. Laboratory tests showed hypocalcemia (Ca: 5.6 mg/dL) and hyperphosphatemia (P: 4.9 mg/dL). On brain CT, there was hyperdense appearance suggesting calcification in the bilateral basal ganglia. On cranial MRI, hyperintensity was noted prominent in the bilateral caudate nuclei and globus pallidus. On physical examination, Chvostek sign was positive. His agitation had completely subsided during his application, so no pathology was found in his psychiatric examination. He didn't describe any delusions/hallucinations. There was no abnormal finding, no movement disorder in his neurological examination. He had no known comorbidity, regular medication or history of operation. Endocrine department consultation was requested to elucidate the etiology of hypocalcemia. It was observed that the patient had accompanying hypoparathyroidism. Parathormone was found to be 5 pg/mL (N:15-65). FS accompanied by hypoparathyroidism was considered as diagnosis. Risperidone 2mg/day was continued and Calcium-VitD3 replacement therapy was started. Ca levels increased to 7.7 mg/dL was observed in the control. He didn't have any active complaints in outpatient clinic controls.

**DISCUSSION:** Fahr Disease is a rare neuropsychiatric disease characterized by the presence of bilateral intracranial calcifications, primarily in basal ganglia. The term Fahr Disease is used for primary/idiopathic basal ganglia calcification. Fahr Syndrome, on the other hand, is used for both primary and secondary basal ganglia calcification. Its prevalence is estimated to be less than 0.5%. Etiology of secondary basal ganglia calcification may be associated with endocrine diseases. It is most commonly accompanied by primary hypoparathyroidism as seen in our case. Intracranial calcifications are generally symmetrical and frequently seen in the globus pallidus. Although mostly presenting with neurological symptoms (especially movement disorders), it was stated that approximately 40% of the cases first showed psychiatric symptoms. Mood disorders are the most common. There is no specific treatment for basal ganglia calcification. Treatment is directed towards the symptoms and underlying calcium metabolism disorders. The striking aspect of our case is that he presented with only psychiatric symptoms without any neurological findings. Consent was obtained from the patient in terms of sharing the information.

**Keywords:** fahr syndrome, hypocalcemia, psychotic mania, basal ganglia, hypoparathyroidism

## A RARE ADVERSE EFFECT RELATED TO ARIPIPRAZOLE: GAMBLING DISORDER

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**OBJECTIVE:** Aripiprazole is a second-generation antipsychotic with partial agonistic properties at the dopamine D2 and D3 receptors and is indicated in treatment of schizophrenia and bipolar disorder. It is assumed that aripiprazole plays a role in pathological gambling because it produces a hyperdopaminergic state via its' agonistic properties at D3 receptors, which are predominantly located in the mesolimbic reward pathway. Here, we present a case with gambling disorder with particular onset after use of aripiprazole. Verbal consent was obtained from our patient for the case report.

**CASE:** A 34-year-old male patient admitted to Ankara University Faculty of Medicine Psychiatry Department in September 2021 with complaints of increased urges for gambling (online soccer bets and horseracing). The patient was diagnosed as social anxiety disorder in adolescence and experienced numerous depressive episodes then after. He was prescribed aripiprazole 5 mg/day as an augmentation treatment of a depressive episode in summer 2018. During the follow-ups, the dose of aripiprazole was increased up to 20 mg/day in summer of 2019. 6 months after the initiation of aripiprazole treatment, he made a bet with 1000€, which was the largest amount he had ever played. Then, for 2 years, he spent a total of 200,000€ on betting and horse racing games. The amount of money he spent for bets increased in line with the increasing dose of aripiprazole. We immediately decreased aripiprazole gradually and aripiprazole was discontinued in two weeks. He wasn't gambling at his control in October 2021, but he still had the will and urge to play. In January 2022, however, he was not gambling and his desire and impulse to play had completely disappeared. South Oaks Gambling Screening Test (SOGST) (cut-off score: 8) and Gambling Disorder Screening Test (GDST) (cut-off score: 4) were administered before and after discontinuation of aripiprazole. Initial scores of SOGST and GDST were 13 and 8 respectively. Both scores dropped to zero in January 2022.

**DISCUSSION:** The FDA Adverse Effects Reporting Database (2002-2012) reviewed the reports of 184 cases regarding a possible association between aripiprazole and impulse control problems and reported that 164 (89%) of the reported cases were pathological gambling. Aripiprazole's SmPC indicates that patients can experience increased urges, particularly for gambling, and the inability to control these urges while taking aripiprazole. The presented case already had a history of playing low money bets, albeit rarely, since adolescence. The amount of bets increased significantly after the initiation of aripiprazole treatment -in line with increasing doses of the drug- reminding a possible dose-response association. Complete recovery after cessation of aripiprazole is noteworthy. We would like to emphasize; (i) the importance of questioning not only the new onset gambling disorder but an increase in the amount spent after the initiation of aripiprazole treatment and (ii) the need for laboratory research to seek for a possible dose-response association between aripiprazole serum levels and gambling urges.

**Keywords:** Aripiprazole, Partial Agonist, Pathological Gambling

## ALOPECIA INDUCED BY ARIPIRAZOLE: A CASE REPORT

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**OBJECTIVE:** Antipsychotic drugs have a unique effect in the treatment of acute psychosis and chronic psychotic disorders such as schizophrenia. This activity is mediated by postsynaptic blockade of brain dopamine D2 receptors or by effects on neuronal 5-HT<sub>2a</sub>, alpha-1, histaminic and muscarinic receptors, which also often correspond to the occurrence of side effects. The most common side effects of antipsychotic drugs are weight gain and related metabolic effects, hypotension, sedation, anticholinergic symptoms, hyperprolactinemia, extrapyramidal symptoms (EPS), cardiac effects, cardiomyopathies, cataracts, and sexual dysfunction. However, hair loss associated with antipsychotics, especially aripiprazole, is a rare side effect. This report aims to present a case with hair loss due to aripiprazole use that is ceased to exist after stopping the treatment in the outpatient clinic of İstanbul Erenköy Mental Health and Neurological Diseases Training and Research Hospital.

**CASE:** Before the case report, the patient was informed and consent was obtained.

In this case, a 40-year-old female developed alopecia while receiving aripiprazole for schizophrenia. She presented herself with increasing hair loss. Before that, because of her positive symptoms about schizophrenia, aripiprazole was initiated in 2018 and then the dose was increased to 15 mg/day. After starting aripiprazole, she reported hair loss [time to onset not clearly stated] and there was no hair loss complaint before aripiprazole use. The measurements such as complete blood count and blood urea, creatinine, aspartate aminotransferase, alanine aminotransferase, free thyroid 4 and thyroid stimulating hormone, serum iron and ferritin levels to detect possible medical causes came out within normal ranges. No additional dermatological disorders were found by dermatologist that would possibly induce alopecia. Furthermore no additional symptoms of endocrinological disorder such as amenorrhea, galactorrhea and hirsutism were found. The patient had no history of any systemic disease and other psychiatric disorders. Therefore, etiology of alopecia was thought to be related with aripiprazole treatment. Aripiprazole was titrated and discontinued. Rather, paliperidone 9 mg/day was initiated. Alopecia disappeared after the drug discontinuation.

**DISCUSSION:** There are few reported cases of alopecia secondary to aripiprazole in the database. Alopecia was reported in 0.1% to less than 1% of adult patients in any phase of a trial during premarketing evaluation of oral aripiprazole.

The cellular mechanism of hair loss due to aripiprazole or psychotropic drugs is not well-known. However, its effects are thought to be associated with the direct toxic effects of psychotropic drugs to the hair follicle matrix. More specifically, hair growth may get interrupted when the hair follicles prematurely enter into the telogen (resting) phase.

On the other hand, aripiprazole is hypothesized to cause hyperprolactinemia by its action on dopamine antagonism in tuberoinfundibular dopaminergic pathway. Thus alopecia can be developed by hyperprolactinemia. In this context amenorrhea, galactorrhea and hirsutism must also be questioned.

In conclusion, the patients should be informed before starting treatment that there is a risk of alopecia associated with aripiprazole use. As a rare side effect of aripiprazole, hair loss should be kept in mind and questioned so that non-compliance with the treatment can be prevented.

**Keywords:** alopecia, antipsychotics, aripiprazole, hair loss, side effects

## A CASE PRESENT WITH PSYCHOSIS FOLLOWING CEREBELLAR PATHOLOGY

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**OBJECTIVE:** Cerebellum is mostly known for its motor function; however, recent research shows that it also has functions in memory, learning, cognition, and affection. According to clinical observations, psychiatric symptoms may occur in cerebellar pathologies such as ischemia, hemorrhage and tumor. We present a case who has psychotic symptoms after his posterior fossa tumor operation.

**CASE:** A 40-year-old male was brought to our emergency service with the complaints of irritability, a belief that his father had been replaced by an identical duplicate, a belief that the cats had been replaced by others, harming pets, hearing commanding voices, talking to himself, thinking that he would be poisoned by food. According to the information received from his relatives, he had a posterior fossa tumor operation at the age of 16, and he has had similar symptoms since then. He had been married twice before but could not continue. His family noticed an increase in his complaints after he started living with his family again about two years ago.

In the brain MRI examination, cerebellar foliae are prominent, cerebellar atrophy is present, the 4th ventricle is significantly wide, the lateral ventricular system is slightly ectatic and asymmetrical.

When the neuropsychological test results were evaluated, moderate verbal and mild non-verbal memory deficits, computational difficulties, and frontal axis findings were found accompanying attention and maintaining attention difficulties. The detected verbal memory impairment is in the form of a frontal-type memory deficit in which recognition is preserved, although learning and spontaneous retrieval processes are impaired.

The neurology consultation thought that the existing cerebellar pathology and its connections to the frontal lobe might explain the present picture.

The diagnosis of the patient was considered as "Organic Delusional (Schizophrenia-like) Disorders". The patient is in remission with the treatment of risperidone 6 mg and biperiden 2 mg.

**DISCUSSION:** The connections between the cerebellum, especially with the prefrontal cortex, support its contribution to cognitive function. Functional imaging shows the role of the cerebellum in language, memory and emotion processing. Schmahmann and Sherman defined Cerebellar Cognitive Affective Syndrome in 1998, describing that the cerebellum has important roles in cognition and emotion.

In addition to cognitive findings, our patient's signs were accompanied by psychotic complaints and Capgras Syndrome. Capgras Syndrome, or delusion of doubles, is a delusional misidentification syndrome which is characterized by a false belief that an identical duplicate has replaced someone significant to the patient. It appears in psychiatric and non-psychiatric cases, including patients with brain damage. Although the causes of psychosis in cerebellar pathologies have not been fully elucidated, Health et al. (1980) stated that the stimulation of the anterior cerebellar region with electrodes led to an improvement in symptoms in patients followed up with the diagnoses of refractory depression, schizophrenia, behavioral problems, epilepsy and organic brain syndrome. In two large independent data sets including 3700 individuals, it was stated that the cerebellar volume decreased in patients with schizophrenia compared to normal individuals, and this was correlated with psychiatric symptoms. Studies conducted in high-risk individuals suggest that cerebellar-thalamo-cortical disconnection may be a factor in the development of psychosis.

**Keywords:** Cerebellar pathology, Cerebellum, Neuropsychiatry, Psychosis

## THE IMPORTANCE OF TRAUMATIC EXPERIENCES AND PHOBIC AVOIDANCE IN VAGINISMUS CASES WITH ATYPICAL SYMPTOMS

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**OBJECTIVE:** Vaginismus is a condition in which there are involuntary contractions of the vaginal muscles that make sexual intercourse difficult or impossible. It is one of the most common female psychosexual problems. Since phobic avoidance was more dominant in this case, it was found to be important in terms of how much it could change the course of treatment.

**CASE:** Unable to be examined in obstetrics, vaginal examination is required for in vitro fertilization treatment.

The 31-year-old patient is married for 9 years, associate degree graduate, housewife. There is no additional health problem. In vitro fertilization treatment was tried 4 times in private centers, with negative results.

Her husband is 39 years old, university graduate, no additional disease. He has had relationships with premarital sexual intercourse. He is currently not describing sexual problems.

There was no problem in her relation with her mother and father, her first menstrual period was at the age of 13 and she not had any problems. Masturbation started at the age of 16, she was doing it in panty without touching the vagina. She met her husband at the age of 18, they remained lovers for 6 years, and making love in clothes once a week enjoying and getting wet. The first night, she felt tightness and fear in the vagina. After making love for 15 minutes, the penis head was placed in the vagina. There was no orgasm. She says that her vagina was narrow and it was opened later.

She cannot fully open her legs during sexual intercourses at the moment, feels slight contractions in sexual intercourse after menstruation, does not allow her husband to touch the vulva, and does not touch her vagina. She says that when she looks at the vagina, she feels bad and sees it as a cut. She usually controls the penis by placing it with his own hand during intercourse.

Since IVF trials were done privately, they were performed with general anesthesia.

The past history revealed a trauma when she was 14 years old, while swimming in the sea, a man she did not know pulled the patient's body towards his own body, felt the man's penis there, and noticed the bad smell of his skin. When she got home, she says he didn't tell anyone about this situation, and she took a shower right away. I wonder if he did something, she was worried and he started to smell bad from the vagina while taking a shower. (Although the traumatic life event was asked at least 4 times, the patient mentioned this situation in the later stages of therapy) Consent was obtained from the patient

**DISCUSSION:** Vaginismus in spontaneous partial remission with vaginal phobia The criterion of successful vaginismus treatment should not be seen as the placement of the penis in the vagina, but the accompanying phobic conditions should be evaluated.

**Keywords:** vaginal phobia, vaginismus, traumatic life event

## PUNDING: A CASE REPORT

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**OBJECTIVE:** Punding, a peculiar, stereotyped behavior characterized by intense fascination with complex, excessive, non-goal-oriented, repetitive activities, is a quite rare condition complicating Parkinson's disease. In our case, we describe a 61-year-old male patient with Parkinson's Disease who applied to the psychiatry department representing behavioral changes.

**CASE:** 61 years old male patient was taken to the outpatient psychiatry clinic in August 2021 by his family. It was his first psychiatric application. He stated that he had no complaints. His daughter stated that the patient has displayed bizarre behavior for over three years. He displayed complex, excessive, repetitive, non-goal-oriented behaviors such as constantly fixing the bed, removing the old legs of the bed, putting on new ones, cutting his winter clothes, and turning them into summer clothes. He changed his clothes at least six times a day. He had been going to the kitchen at night and eating whatever he could find. When the patient went shopping, he bought items that were not needed. He bought large amounts of groceries. He had been sexually persistent and forceful and has occasionally aggressive sexual demands on his wife. He told his daughter that he had gone to the doctor to get "injections" to reduce his sexual desire. In addition, for the last five years, he has had suspicions that his wife was not a virgin and cheated on him when they married. The patient was consulted to the Neurology department considering the side effects of antiparkinson medication. Pramipexole was planned to be tapered and discontinued within 3 weeks. The patient, whose gait was affected in the first week of tapering the drug, could not comply with the plan. He didn't come his control appointments. The patient was diagnosed with Parkinson's Disease when he was 46 years old. His disease started with gait disturbance, then bilateral, symmetrical contractions in the legs and arms. The patient was started on levodopa treatment, and full recovery was achieved in motor complaints. After getting a response, the patient stopped taking his medications. After two years, he started back on the medication when his gait was affected. He used drugs irregularly like this for four years. He has been using Levodopa and dopamine agonist combined therapy for the last 5 years.

**DISCUSSION:** Compulsive behaviors are thought to be due to excessive dopaminergic stimulation. However, it has been reported that compulsive behaviors may occur depending on the severity and progression of Parkinson's disease independent of dopaminergic treatment. Punding has been conceptualized by some to be a form of compulsion. It should be differentiated from OCD signs and symptoms. The precise association between Dopamine Dysregulation Syndrome and punding is not clear but DDS frequently occurs together with punding. It may develop after prolonged use of dopamine agonists. Hence it is important to label neuropsychiatric symptoms phenomenologically in patients with parkinson disease in order to chose the best therapy options.

Informed consent was obtained from the patient for publication of this case report.

**Keywords:** dopamine dysregulation syndrome, punding, Parkinson's disease

## CLOZAPINE TREATMENT IN UNSPECIFIED CATATONIA: A CASE REPORT

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**OBJECTIVE:** The aim of this case report is to demonstrate the improvement in functionality by administering clozapine treatment for a patient with unspecified catatonia diagnosis. The patient's consent was obtained.

**CASE:** A 30-year-old male, single, college graduate, unemployed, living with parents. The symptoms first started in 2014 as anhedonia, decrease in social activities, introversion, and reluctance. His first visit to psychiatry was in 2016 when his current symptoms increased, and he was admitted to the psychiatric clinic. He was monitored with the diagnosis of atypical psychotic disorder. The patient was on olanzapine 20 mg/day, was admitted to the psychiatric clinic for the second time in 2019 due to complaints of increased psychomotor activity, agitation, wordlessness and lack of appetite. According to the statements of his family, the patient frequently had emergency visits and haloperidol and biperiden IM applications were performed in ER. He was admitted to our clinic on 15.03.2021 with symptoms of decreased psychomotor movements, negativism, and mutism. It was observed that his appearance was appropriate for his age, there was a decrease in self-care, no effort to communicate and eye contact was present. Affection was blunt. Cranial MRI was ordered and neurology department was consulted. No neurological disease was detected. He got 30 points from the BPRS and 76 points from the PANS scale. Lorazepam 5 mg/day treatment was started orally. On the 2nd day of admission, the olanzapine dose was reduced to 15 mg/day and sertraline 25 mg/day was added to the treatment due to sleepiness, uneasiness, restlessness. Sertraline 25 mg/day treatment was stopped on the 4th day when there were stereotypical movements. The dose of lorazepam was increased to 6 mg/day. ECT couldn't be done due to insufficient conditions of the hospital. The dose of olanzapine was reduced and clozapine was started. The dose of clozapine was increased up to 200 mg/day, the dose of Lorazepam was reduced to 2.5 mg/day. It was observed that there was significant decrease in symptoms. At that time, he had 14 points on BPRS and 52 points on the PANSS scale. In the next 10 months following discharge, his treatment with clozapine 200 mg/day was continued and there was significant improvement in cognitive functions on the last mental state examination.

**DISCUSSION:** Catatonia is important because it might be associated with significant impairment in self-care, decreased oral intake and unpredictable aggression that may threaten the patient or their relatives. Catatonia is associated with the development of malignant catatonia, the development of malignant neuroleptic syndrome and an increased risk of morbidity mortality. Studies have shown the effectiveness of clozapine in the treatment of catatonia. It also shows positive effects in some cognitive areas such as verbal fluency, declarative memory, attention, acceleration in mental functions. Clozapine can improve the quality of life by improving cognitive functions and psychopathology in treatment-resistant patients and lead to functional improvement in 30-50% of the patients. However, it may be necessary to use clozapine for at least six months in order to have positive effect on cognitive functions.

**Keywords:** unspecified catatonia, clozapine, lorazepam

## BUPROPION OVERDOSE INDUCED SEROTONIN SYNDROME: A CASE REPORT

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**OBJECTIVE:** Serotonin syndrome (SS) is a predictable (type-A) life-threatening drug reaction which is caused by increased serotonergic activity in central and peripheral 5-Hydroxytryptamine receptors. Bupropion is a selective noradrenaline and dopamine re-uptake inhibitor and it is not expected to have a direct serotonergic effect. Bupropion induced serotonin syndrome can be seen rarely, and in the most cases it has been thought to be associated with its combination with serotonergic drugs. Serotonin syndrome caused by bupropion as a single agent is very rare. Here, we report a bupropion overdose-induced serotonin syndrome case in which peroral cyproheptadine was administered for treatment.

**CASE:** A 19 year-old female with a history of rapid cycling bipolar disorder, who had poor drug compliance and discontinued prescribed drugs shortly before, applied to emergency room 30 minutes after ingesting 30 tablets of extended release bupropion 300 mg on the purpose of suicide. Although no abnormal findings were detected on mental state examination and her vitals had been found stable on arrival, her mental status rapidly worsened. In the course of time she had blurred vision, hallucination, dyskinetic movement, dysarthric speech and witnessed generalized tonic-clonic seizure. She was tachycardic and tachypneic. Her pupils were mydriatic, her oral mucosa was too dry. Neurological examination revealed 3+ brisk deep tendon reflexes in upper extremities and +4 deep tendon reflexes in lower extremities, myoclonus, inducible clonus, ocular clonus, tremor, and muscle rigidity. Lorazepam was administered for agitation, prophylactic levetiracetam was given for probable repetitive seizure. The patient was administered 12 mg of cyproheptadine in an initial dose, and 2 mg every two hours, 9 times in total until clinical response was achieved. It was observed that the consciousness and the vital signs returned to normal and the other symptoms of SS improved totally in the physical and neurological examination performed 38 hours after the overdose. Informed consent was obtained for the case report.

**DISCUSSION:** Clinicians should consider that SS may be induced by bupropion overdose and that it is possible to successfully treat the syndrome with cyproheptadine.

**Keywords:** Bupropion, cyproheptadine, serotonin syndrome

## PRESENTATION OF THE CREUTZFELDT-JAKOB DISEASE WITH ANOREXIA

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**OBJECTIVE:** Anorexia nervosa is a disorder in which there is excessive mental preoccupation with body weight and shape and conscious efforts to stay weak due to the fear of gaining weight. In this article, we present a case of Creutzfeldt Jakob, whose medical pathologies have not been adequately investigated and who was consulted to psychiatry by the emergency department considering anorexia nervosa due to weight loss. Our aim is to emphasize the importance of excluding related medical conditions before diagnosing psychiatric disorders.

**CASE:** A female patient applied to the emergency department with nausea, vomiting, loss of appetite and 10-15 weight loss for the last 1.5 months, was evaluated by many departments before and did not have any additional medical conditions other than vertigo, was consulted the psychiatry diagnosis of anorexia nervosa. According to the information received from the patient and her relatives, it was learned that endoscopy was planned 3 months ago with the complaint of abdominal pain, but the patient did not undergo endoscopy. No pathology was found to explain the clinical situation in other departments where she was evaluated, duloxetine was prescribed in the psychiatry application 1 month ago and it would be reevaluated after exclusion of other medical conditions. Patient; she stated that although she has been seeking treatment for a long time, her condition is getting worse, she continues to lose weight and she wants to gain weight. She has a good appetite but prefers not to eat because she is afraid of vomiting. It was recommended that endoscopy should be performed primarily and that she should consult a psychiatrist after other medical conditions were excluded. She was admitted to internal medicine for the purpose of investigating the etiology. It was learned that the endoscopy result was pangastritis, but the investigation was continued since there was no diagnosis to explain the clinical picture. No pathology was found in abdominal, thorax and brain computed tomography (CT) scans. Tuberculin skin test result was negative. The patient whose complaints did not regress; infectious diseases were consulted for meningitis. Meningitis was not considered as a result of lumbar puncture (LP). It was recommended to consult neurology in terms of autoimmune encephalitis and prion diseases. In cranial magnetic resonance imaging (MRI), the findings were found to be compatible with Creutzfeldt-Jakob Disease. Diffuse encephalopathic changes were observed in electroencephalogram (EEG). The patient, whose clinical findings, MRI and EEG imaging supported the diagnosis of Creutzfeldt-Jakob Disease, was transferred to the neurology service. Patient consent was obtained for this case report.

**DISCUSSION:** There are case reports that Creutzfeldt-Jakob disease can start with psychiatric symptoms. Especially elderly patients who do not have a previous psychiatric history should be examined in detail in terms of pathologies of organic origin. This case is important in terms of emphasizing the importance of follow up and observation regarding examination and diagnosis processes in psychiatry, and showing that medicine is a multidisciplinary approach.

**Keywords:** Anorexia nervosa, Creutzfeldt-Jakob disease, Psychiatry

## QUETIAPINE-INDUCED DYSTONIA: A CASE REPORT

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**OBJECTIVE:** Dystonia is a type of extrapyramidal side effect (EPSE) characterized by involuntary contractions of antagonistic muscle groups. It commonly involves the head, neck, eyes and mouth, resulting in intermittent spasms or abnormal posturing. Risk factors for acute dystonia include younger age, male gender, high doses of high potency antipsychotic medication, cocaine use, hypothyroidism, hypoparathyroidism and previous history of dystonia. Drug-induced EPSEs have drastically declined since the emergence of second-generation antipsychotic medications.

Quetiapine is a second-generation antipsychotic. In initial clinical trials, there were no differences between quetiapine and placebo treatment groups concerning the incidence of extrapyramidal symptoms. We report a rare case who developed dystonia approximately 12 hours after using quetiapine

**CASE:** A 24-year-old male patient was followed up for 2 years with the diagnosis of bipolar disorder. It was learned that the patient had been treated with valproic acid 1000mg/day and quetiapine 50mg/day until 4 months ago, and his mood was stable. His treatment was changed to paliperidone 3mg/day, valproic acid 1000mg/day and quetiapine 400mg/day due to manic episode 4 months ago. After this change, the patient developed tremor in his hands and dystonia in his left arm.

In an external clinic, the patient's dystonia was thought to be a drug side effect associated with paliperidone. The patient was advised to discontinue only paliperidone, but the patient stopped using all drugs. therefore, a manic episode developed. The patient was referred to our clinic for the first time. We hospitalized the patient with quetiapine 600mg/day, valproic acid 1000mg/day.

Approximately 12 hours after the start of treatment, the patient's left arm developed dystonia as previously described. Thereupon, only quetiapine treatment was terminated by us in order to determine the drug that caused it. After this change, the patient's dystonia improved rapidly. Verbal and written consent was obtained from patient.

**DISCUSSION:** Traditionally quetiapine is known to be one of the least likely antipsychotic agents to cause EPSEs. There are few documented cases of quetiapine-induced acute dystonia.

In these cases, doses between 12.5mg and 400mg and onset at between three hours and two weeks of quetiapine commencement. In our case, the first dystonia developed 12 hours after the quetiapine dose was increased from 50mg/day to 400mg/day. Then, after a 2-month drug-free period, the patient was started on 600mg/day quetiapine, and dystonia recurred. This suggests that there may be dose-related dystonia with quetiapine. The reversibility of dystonia following discontinuation of quetiapine reveals a causal relationship. In our case, dystonia did not recur with chlorpromazine, a drug with a higher risk of EPSE, which started after quetiapine was discontinued.

Our aim in presenting this case is to emphasize that even quetiapine can cause dystonia unexpectedly in a sensitive population and to show that it may be beneficial to switch to another antipsychotic in such a case. At the same time, it is to draw the attention of clinicians that one of the reasons for a possible dystonia picture that may occur when increasing the dose in patients with multiple drug use may be the increase in the dose of quetiapine.

**Keywords:** Drug Side Effect, Dystonia, Epse, Quetiapine

## AN INTERESTING CASE OF CONVERSION DISORDER: THE CLOSURE OF THE EYELIDS

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**OBJECTIVE:** Conversion disorder, also known as functional neurological symptom disorder, is a psychiatric disorder characterized by symptoms that affect sensory or motor function. These signs and symptoms are inconsistent with known patterns of neurological diseases or other medical conditions. Psychological factors such as conflicts or stress are thought to be associated with deficits. Patients usually apply to many different departments and then apply to the psychiatry department with the guidance of a physician. In this case report, an uncommon finding of conversion disorder and the benefit of treatment will be highlighted. Verbal and written consent was obtained from the patient for this case report.

**CASE:** A 37-year-old man, married, lives with his wife and 2 children. The patient, who is a primary school graduate, changes jobs frequently. He is currently transporting in the textile industry. He applied to us with the complaint of full closure of the eyelids at least once a day and inability to open them for 3-4 hours. The symptom first appeared 4 years ago after witnessing an argument between his fiancée and his father. He went to ophthalmology and neurology departments in many different centers. OCT and single fiber EMG examinations showed findings within normal limits. Anticholinergic, dopaminergic drugs and various eye drops were prescribed but did not benefit from these treatments. A neurologist referred us to our outpatient clinic. The frequency and duration of symptoms decreased with sertraline 50mg/day treatment for 7 months. After 7 months of follow-up, he left the drug voluntarily. After encountering stressful situations for a few months, the complaint started to again. Closing his eyelids often resulted in his dismissal. He stated that he had financial difficulties because of this and he could not get it out of his mind ruminatively. The patient, who had a history of total vision loss in the left eye after physical trauma in childhood, had no known comorbidity and no family history of psychiatric disease. The patient, who showed a la belle indifférence in mental state examination, was followed up in our service for 27 days with the diagnosis of "Conversion Disorder". Duloxetine was started during his hospitalization and the dose was increased to 60 mg/day. Sulpiride 50 mg/day was added to the patient's treatment, and sulpiride treatment was discontinued due to prolactin elevation. The frequency of symptoms decreased from every day to twice a week, and the duration from 3-4 hours to half an hour. The patient was discharged with 60 mg/day of duloxetine.

**DISCUSSION:** Conversion disorder, which usually presents with symptoms such as paralysis, blindness and inability to speak, may present with unexpected findings as seen in this case. In this case, duloxetine and sulpiride treatments, which are the first choice in conversion and somatization disorders, were applied to the patient who came with the complaint of "complete closure of the eyelids". With partial remission of symptoms, his functionality increased and his depressive mood regressed.

**Keywords:** conversion disorder, functional neurological symptom disorder, hysteria, eyelid, duloxetine

## METOCLOPRAMIDE-ASSOCIATED AKATHISIA

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**OBJECTIVE:** The mechanism of action of metoclopramide has been demonstrated by antagonizing the effect of dopamine on the central nervous system and other organ systems. The action of metoclopramide on the medullary chemoreceptor trigger zone makes it useful as a routine antiemetic and in preventing drug-induced vomiting. Side effects have been reported in up to 20% of patients. Tardive dyskinesia and akathisia are among the most common ones. In this presentation, we will share a patient who used metoclopramide as self-medication for the treatment of migraine attacks and was followed up with the diagnosis of panic disorder.

**CASE:** Our patient is a 35-year-old woman, married, has 2 children, and works as a nurse. She was diagnosed with migraine 10 years ago. During this period, the patient was taking non-steroidal anti-inflammatory drugs during migraine attacks. She started using oral metoclopramide as a self-medication one year ago after her attacks started to be accompanied by nausea and vomiting. After this treatment, when the complaints of restlessness and constant desire to move began to add, the patient applied to neurology again, and a co-diagnosis of panic disorder was made and paroxetine 20mg/g was started. After the patient took metoclopramide in recurrent migraine attacks for 1 year, his complaints continued and his expectation anxiety increased, the treatment for panic disorder was increased to paroxetine 60mg/d. During this period, the patient also started to receive iv diazepam and iv metoclopramide in the emergency services. The patient's subsequent complaints were thought to be due to metoclopramide, and metoclopramide treatment was first discontinued in order to exclude the diagnosis of panic disorder. As her complaints about migraine attacks continued, paroxetine was gradually tapered off, and sumatriptan was started with the recommendation of the neurologist. Upon the regression of the patients complaints during the follow-up, the diagnosis of panic disorder was excluded, and neurology control was recommended for the continuation of the migraine treatment.

**DISCUSSION:** Akathisia defined as a combination of complaints of restlessness and at least one of the following observed movements: fidgeting or swaying of legs while sitting, swaying from foot to foot or "walking in place", inability to sit or stand for at least a few minutes to relieve restlessness inability to stop. As a potent DA-receptor blocking drug, metoclopramide is associated with psychomotor side effects, particularly acute dystonia, akathisia, and parkinsonism, and probably has some efficacy as an antipsychotic. Akathisia usually develops within weeks of initiation or dose escalation of a neuroleptic drug, may be severe, and may be associated with dysphoria, irritability, aggression, and suicide attempts. For this reason, as in our case, we believe that detailed medical history and psychiatric evaluation are important in diagnosis and treatment evaluation. Informed consent was taken from patient.

**Keywords:** Akathisia, Anxiety, Metoclopramide, Migraine

## IS THIS CYBER FEAR OR CYBER PARANOIA?

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**OBJECTIVE:** As internet technology and microchip devices settle into heart of our lives, number of reports on paranoid delusions related to technology increases exponentially. The most encountered theme is being surveilled by electronic devices. The idea of online privacy being revealed, surveilled, and controlled may lead to anxiety and fear among users.

In addition to older population and people unfamiliar to technology, information technology professionals are also widely affected by this phenomenon.

The boundaries between realistic and unrealistic fear are blurred and subjective to some degree. Consequently, there is not a rigid set to define the limits. Therefore, this fear can be expressed as a wide spectrum ranging from an understandable concern to delusional thought which also corresponds to a scale between cyber-fear and cyber-paranoia. Cyber-paranoia is a state of mind which individuals have unrealistic fears concerning threats of being attacked, persecuted, or victimized related to their actions on the internet. Delusions about technology are generally modified delusions of persecution, broadcasting, and control.

**CASE:** A 30-year-old male patient's case is discussed with the patient's consent. The patient had a bachelor's degree in computer programming and works as a software programmer. Due to the pandemic, he was working remotely for over 2 years.

The patient used multiple psychoactive substances for over five years but has no psychiatry records, was showing paranoid and persecutive delusions of being followed over the phone and computer for the last 2 years. Since he must interact with computers due to his profession, his delusions prevented him from doing his job and impairs his functionality.

The patient stated that he is extremely competent in computer programming, not being able to find out who is following his electronic devices causes him to anger. Therefore, he wants to stay away from technological devices, but cannot succeed. The patient's delusions caused increasing social withdrawal in the last 2 years. He became extremely unsocial and introverted during this period.

In psychiatric examination, there was no remarkable finding other than paranoid and persecutive delusions. There was no perceptual pathological finding, cognitive functions are preserved. Based on his expertise in technology, the patient was very tightly and systematically attached to his delusions. He has lack of insight, reasoning was inadequate.

During hospitalization, diagnosis and proper treatment decision were challenging. After detailed research, the patient's narratives were admitted as delusions. The patient was diagnosed with psychotic disorder due to multiple drug use and use of other psychoactive substances. Olanzapine for psychotic symptoms and Carbamazepine for substance craving treatment were chosen. The patient is recovering, gained full functionality, and continues to work in the same field.

**DISCUSSION:** In conclusion, although it is expected that people from the general population with low technology awareness have a tendency of cyber-paranoia, surprisingly, highly competent technology sector employees may also tend to suffer from cyber-paranoia.

Therefore, diagnosis and treatment of cases on this subject may be hard and complicated. Such cases require psychiatrists to be more competent in technology and examine the case more deeply to make the correct diagnosis and apply the appropriate treatment.

**Keywords:** Cyber fear, cyber paranoia, technology, psychosis

## A CASE REPORT OF POSTICTAL PSYCHOSIS

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**OBJECTIVE:** Epilepsy, being a disease characterized by intermittent, excessive and irregular discharge of nerve cells, has frequently been associated with mental disorders.

The etiology of epileptic psychoses is not known exactly. However, schizophrenia-like psychoses can be seen in epilepsy cases, especially in the ones involving temporal lobe. In complex partial epilepsy, psychotic symptoms are observed in 10-30% of cases.

Historically, psychotic symptoms have been frequently organized according to when they occur in relation to seizures. In that aspect, "ictal" and "post-ictal psychosis" terms have been used, respectively defining whether the psychotic symptoms occur only during the seizure, or shortly after the seizure. Similarly, a schizophrenia-like condition with persistent psychotic symptoms occurring in between seizures, yet not being directly related to them, is called "interictal psychosis". Herein, we present a post-ictal psychosis case. Written and verbal consent was obtained from the patient.

**CASE:** M.A., 32-year-old female patient, was brought to us by her family and police teams with complaints of visual and auditory hallucinations, insomnia, aggression, mystical delusions, story of wounding her family with a knife and disturbing the environment. The patient has been followed up with epilepsy diagnosis for 10 years. She has been using zonisamide 300 mg/day and lacosamide 400 mg/day. The number of seizures has decreased in recent years, due to that treatment, to once every 2-3 months in average. She had seizures 5-6 times in a row during the last 10 days, and her state of psychosis regressed 2 days after she was admitted to our hospital. In her psychiatric examination, no positive findings was found other than a weakening in recent memory, and she did not remember that she had injured her family. The patient had 3 more epileptic seizures during her 2-month hospitalization period, and exhibited a short-term aggressive attitude towards nurses and other patients in one of these seizures. Quetiapine 200mg XR was added to the drug therapy of the patient, and after neurology consultation valproate 500mg was added as a third antiepileptic. The patient was requested to be evaluated for refractoriness and epilepsy surgery. She had no interictal psychiatric complaints and symptoms, and was discharged with zonisamide 300mg/g, lacosamide 400mg/g, valproate 500mg/g and quetiapine 200mg XR, with neurological and psychiatric control recommendations.

**DISCUSSION:** The prevalence of postictal psychosis, which constitutes 25% of all epileptic psychoses, has been reported to be 6.4-10%. After a transition period without any psychotic symptoms accompanied by blurring of consciousness, different psychotic and affective symptoms such as grandiose delusions, mystical delusions, hallucinations, and catatonia may occur for a short time (24 hours - 3 months). Mostly, no detectable psychopathology occurs between the attacks.

Post-ictal psychosis can be resolved by spontaneous combination of either adjusting the doses of antiepileptics or low-dose antipsychotic treatment. Epilepsy surgery may be a suitable option for patients who are resistant to treatment.

More studies are needed to investigate the relationship between epilepsy and psychiatric diseases and the appropriate treatment.

**Keywords:** Aggression, temporal lobe epilepsy, post seizure, psychosis

## VALPROIC ACID ASSOCIATED RECURRENT LEUKOPENIA: A CASE REPORT

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**OBJECTIVE:** Valproic acid (VA) is a widely used antiepileptic and mood stabilizer drug. It acts through gamma amino butyric acid, an inhibitory neurotransmitter. In this case report, a 52-year-old female patient with intellectual disability and psychotic disorder who developed leukopenia after VA treatment will be presented.

**CASE:** 52-year-old woman patient. Her language and motor development is unknown, It was stated by her relatives that the patient was behind her peers in childhood. Although the patient went to primary school, she could not learn to read and write. About 5 years ago, the patient, who was brought by her relatives due to complaints of inadequacy in self-care, inability to do her daily work, talking to herself, seeing her dead father, and suspecting people, was diagnosed moderate intellectual disability and atypical psychosis. VA 1000 mg/day and amisulpride 400 mg/day were started. VA was discontinued due to the development of leukopenia in the follow-up. After the treatment of the patient was arranged, she did not come to the control examinations. In the hematology follow-ups after 5 years, the cause of leukopenia could not be found and it was thought to be due to drug use, and the patient who was using olanzapine 10 mg/day and VA 1000 mg/day was referred to us. In the mental status examination of the patient, eye contact and self-care decreased. affect was shallow, thought content was poor for age, persecutory delusions and visual hallucinations were present. she had no insight and her judgment was impaired. The white blood cell (WBC) count was 3100/ $\mu$ L. It was learned that due to the complaints of shouting, talking to herself, and thinking that people were slandering her, the drugs were given by the relatives of the patient for about 6 months outside of the doctor's control. VA was discontinued and olanzapine was increased to 20 mg/day. The WBC count was 4200/ $\mu$ L in the follow-up one week later. Consent was obtained for the case report.

**DISCUSSION:** Common side effects of VA include fatigue, tremors, sedation, elevated liver enzymes, gastrointestinal symptoms and weight gain. The most common hematological side effect is thrombocytopenia. It is known to cause aplastic anemia and peripheral cytopenia with bone marrow suppression. Olanzapine, one of the antipsychotic drugs, has a low risk of leukopenia. There is a case in the literature about amisulpride and it is known to be more reliable. Risk factors for the development of leukopenia are presence of leukopenia before starting treatment, use of more than one drug, and drug-related leukopenia in the past. In our patient, olanzapine monotherapy was switched and she was followed up closely.

This case shows the importance of blood tests during the first application and follow-up and informing the relatives of the patients about the treatment and possible side effects. With our case, we aimed to emphasize the importance of leukopenia, one of the rare side effects of VA, and to contribute to the literature.

**Keywords:** valproic acid, leukopenia, psychosis

## A CASE OF SCHIZOAFFECTIVE DISORDER WITH CONGENITAL SPINAL DYSRAPHISM

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**OBJECTIVE:** The "Occult Spinal Dysraphisms" group includes some congenital malformations during embryological development and mesenchymal and ectodermal structures. Tethered cord syndrome is not considered a complete closed dysraphism; it generally tends to present as a result of closed dysraphisms. These anomalies are usually seen with neurodevelopmental midline defects such as cardiac malformations, urogenital problems, and central nervous system migration defects. In this case report, we present an asymptomatic occult spinal dysraphism with schizoaffective disorder. The patient and his family agreed to participate in the study.

**CASE:** A 37-year-old male patient diagnosed with tethered cord malformation was admitted to our emergency department with mystical and paranoid delusions, auditory hallucinations, restlessness, and a hostile attitude towards his family for the last 2 months. On his mental examination, his affect was dysphoric and his behavior was disorganized. From his detailed medical history, it was learned that his first psychiatric examination was in 2010 with similar complaints, and he was diagnosed with bipolar affective disorder. He was hospitalized and medicated with a combination of mood stabilizers and antipsychotics. His last treatments were amisulpride 200 mg/day, lithium 900 mg/day, aripiprazole 15 mg/day, and risperidone intramuscular 50 mg/14 days. After psychiatric examination and hospitalization, it was observed that the serum lithium level was 0.03 mmol/L. His serum folate (2.38 ng/mL) and vitamin B12 (120 pg/mL) levels were low and serum homocysteine level was 27.6  $\mu$ mol/L, which is higher than the normal population. From his physical examination, it was observed that he has approximately 2 cm of depth and a 3 cm diameter sacral dimple with hypertrichosis at the L5-S1 spinal segment. In the follow-up, it was determined that his psychotic complaints had regressed, and he was discharged to continue his outpatient follow-up.

**DISCUSSION:** Some prenatal and birth complications (hypoxia, infection, substance use, etc.) and family history, particularly neural tube originated ones, associated with schizophrenia and bipolar disorder with psychotic symptoms, have been suggested in the literature. It is thought that programmed cell death, myelination, and synaptic pruning may cause disruption in developmental processes. In this presented case, the preconceptional folate and micronutrient deficiency of his mother may be a probable cause that led to the neural tube defect. Future studies focusing on multidisciplinary approaches are needed to explain the etiology of schizophrenia and bipolar disorder that are related to neurodevelopmental factors.

**Keywords:** Schizoaffective Disorder, Spinal Dysraphism, Tethered Cord

## POST TRAUMATIC STRESS DISORDER AFTER CARDIOMYOPATHY AS AN ADVERSE EFFECT OF BNT162B2 MRNA VACCINE IN YOUNG MALE

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**OBJECTIVE:** We herein aimed to present a patient that was previously known to be healthy but had psychiatric disorders like depression, anxiety, and sleep-wake disorder after staying 3 days at ICU because of myocarditis related to the BNT162b2 mRNA vaccine.

**CASE:** A 19-year-old man with no prior psychiatric history demonstrated psychiatric disorders like depression, anxiety, and sleep-wake disorder after staying 3 days at the Intensive Care Unit (ICU) because of myocarditis related to the BNT162b2 mRNA vaccine. Based on the characteristic symptoms like flashbacks that include physical symptoms, bad dreams, anxiety, insomnia, and irritability, a clinical diagnosis of post-traumatic stress disorder (PTSD) was made. His symptoms were relieved at the 3rd week with 20 mg/day of fluoxetine per oral (p.o.) treatment.

**DISCUSSION:** The BNT162b2 mRNA vaccine, which is very significant to overcome the COVID-19 pandemic may have rare but severe indirect psychiatric side effects. According to that, an enlarged examination including vaccine history in our routine clinical psychiatric evaluation and a psychiatric guide for immediate support and assistance for the patients who stay at the intensive care units are important.

**Keywords:** COVID-19 Vaccines, Post-Traumatic Stress Disorders, Fluoxetine

## PROPYPHENAZONE INDUCED PSYCHOSIS

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**OBJECTIVE:** There are some studies in the literature reporting psychotic symptoms induced by nonsteroidal anti-inflammatory drugs (NSAIDs). The case we reported has psychotic symptoms during a drug that contains a NSAID propyphenazone and paracetamol and the stimulant caffeine, use.

**CASE:** The case was a 42-year-old man who was sent to Forensic Psychiatry inpatient clinic for mental evaluation by court. He had history of psychiatric illness for "psychotic disorders" between 2007-2010. He has been used analgesic drug since 2005 because of headache. The drug tolerance is developed to high doses like 7-8 times a day, as it gives energy and calms him down. After taking the medication 2-3 times a day for two months, symptoms such as introversion, muttering to himself, delusions, closing the curtains of the house tightly in effect of suspicions appeared, which were noticed by his family. He was taken to a psychiatrist and he used olanzapine 15 mg/day for a year. He has stopped also taking the drug which contain propyphenazone and there was no psychiatric symptoms; however, he started using it again 4-5 times a day in the last two months and symptoms such as irritability, delusions of persecution, (skepticism about harming her family) reoccurred.

There was no family history of psychiatric illness, neurologic disturbance, or substance use. The neurological examination and laboratory results were normal. After hospitalization, consent of patient was obtained and started on risperidone for psychotic symptoms, uptitrating from 2 to 6mg/d. Eight weeks later, psychotic symptoms had completely improved. Follow-up visits made four weeks later, revealed no recurrence of the symptoms.

**DISCUSSION:** The drug which the patient used is an analgesic combination indicated for the management of headache. It contains the analgesics propyphenazone and paracetamol and the stimulant caffeine. Propyphenazone a nonsteroidal anti-inflammatory drug like indomethacin. Indomethacin is a non-selective inhibitor of cyclooxygenase 1 and cyclooxygenase 2 enzymes, which play a role in prostaglandin synthesis from arachidonic acid. NSAIDs have been reported to inhibit phosphatidylinositol 3-kinase/Akt signaling in several somatic cell lines. Many studies have shown evidence for the impairment of the AKT/GSK-3 $\beta$  signaling pathway in schizophrenia. Indomethacin and also propyphenazone may have been related to inhibit prostaglandin synthesis and thus increase dopamine levels indirectly, which may cause psychotic symptoms. The cases presented suggest that NSAIDs can induce or exacerbate adverse psychotic symptoms in certain vulnerable patients. The drug-induced psychosis in this patient may have been related to the effects of propyphenazone on prostaglandin synthesis and Akt signaling.

**Keywords:** Propyphenazone, NSAIDs, Psychosis, Adverse psychiatric reactions

### C.4168G>A(P.ALA1390THR) VARIATION IN KMT2D GENE DETECTED IN AN ULTRA-TREATMENT-RESISTANT SCHIZOPHRENIA PATIENT: A CASE REPORT

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**OBJECTIVE:** Schizophrenia is a chronic mental disorder characterized by positive, negative, disorganized and cognitive symptoms. Environmental and genetic risk factors are associated with the development of the disorder. In this report, the involvement of certain genetic mechanisms in the etiology of schizophrenia will be discussed by presenting an early-onset and ultra- treatment- resistant schizophrenia case.

**CASE:** A 20-year-old male patient who presented symptoms such as anger, aggression, laughing and talking to himself was admitted to our outpatient clinic. Patient's mother declared that he had walked and learned to talk later than his peers, and had been followed in various child and adolescent psychiatry clinics with the diagnoses of mild mental retardation and attention deficit and hyperactivity disorder. His persecutory delusions and visual and auditory hallucinations started when he was 16 years old. These symptoms did not respond to risperidone 4 mg/d treatment. As it was learned that, several combinations of antipsychotics such as aripiprazole, haloperidol, olanzapine, and risperidone at therapeutic doses, didn't work, the decision to hospitalize the patient and initiate clozapine was taken. Physical examination revealed macrocephaly, high palate arch, prominent forehead and hyperpigmented skin lesions and he was diagnosed with familial lentiginosis by Dermatology department. The blood coagulation panel was studied in the affected family members and the patient because his mother had a history of early-onset Parkinson's Disease, cerebrovascular accident and recurrent spontaneous abortion, and his older brother had a history of deep vein thrombosis. Methylene tetrahydrofolate reductase C677G mutation was positive in the patient. The patient was referred to genetics for a dysmorphology examination and testing. In whole exon sequencing analysis c.4168G>A(p.Ala1390Thr) variant was heterozygous in exon 15 of KMT2D (NM\_003482.4) gene which is associated with Kabuki Syndrome, and c.427G>A(p.Ala1453Thr) variant was detected as hemizygous in exon 3 of galactosidase alpha; GLA (NM\_000169.3) gene, associated with Fabry disease. It was reported by the Genetics department, that these variants are classified as "Variant of Uncertain Significance" and should be reevaluated once a year.

In the follow-up, psychotic symptoms did not respond to treatment although an effective clozapine blood level was achieved. Augmentation strategies such as adding long acting forms of risperidone and aripiprazole depot form and oral amisulpride form to clozapine treatment, did not decrease the severity of the symptoms as well. Thereupon, it was thought that he had ultra- treatment-resistant schizophrenia.

**DISCUSSION:** Schizophrenia is a multifactorial and highly heritable disease. It is stated that certain rare genetic variants are involved in the etiology. The variant detected in the KMT2D gene (Lysine N-Methyltransferase 2D) is found to be associated with brain development and may play a role in the pathophysiology of neuropsychiatric disorders such as autism and schizophrenia. The relationship between schizophrenia and genetic variants detected in this case is discussed in the light of literature. In conclusion, in certain early onset cases of schizophrenia, specific physical examination findings, and the relevant family history can be helpful in understanding the genetic processes involved in the etiology.

Consent for presentation was obtained from the case.

**Keywords:** Schizophrenia, Kabuki, Genetic Variation

### NEW VARIANTS, NEW SYMPTOMS IN COVID-19: FIRST EPISODE PSYCHOSIS AND COTARD'S SYNDROME AFTER INFECTION WITH THE B.1.1.7 VARIANT OF CORONAVIRUS

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**OBJECTIVE:** During the course of coronavirus disease-2019 (COVID-19) pandemic, many neuropsychiatric manifestations of the disease have been observed while the precise pathophysiology remains unknown. New variants of coronavirus such as the 501.V2 and B.1.1.7 have emerged and obscurities in pathogenesis have increased even further with these variants. Here, we describe a patient with long-term effects of COVID-19, manifesting first episode psychosis accompanied by Cotard's Syndrome (CS) after infection with the B.1.1.7 variant of SARS-CoV-2.

**CASE:** A 41-year-old female with no adverse medical history was admitted to the emergency department with symptoms of loss of smell, myalgia and sore throat and COVID-19 infection was confirmed by a positive RT-PCR test result for the B.1.1.7 variant of coronavirus. Two months after the completion of treatment for COVID-19, the patient started to have thoughts of being annihilated by viral occupation of her body and of her nervous system getting decomposed. The patient's family brought her to the psychiatric emergency department. The patient was found to have strong suicidal ideations, referential thoughts, belief of being physically dead and her children being in danger of obliteration by COVID-19. Clinical evaluation of the mental state of the patient was significant for decreased speech output and speed as well as psychomotor activity. Nihilistic, persecutory and referential delusions with no insight were recorded. Upon hospitalization and treatment with olanzapine 20mg/day orally and electroconvulsive therapy, her psychiatric symptoms and suicidal ideation ameliorated. The patient was discharged from the hospital with olanzapine 20mg/day orally and she is currently being followed-up in our outpatient clinic.

**DISCUSSION:** To the best of our knowledge, this is the first report of a patient who developed CS and psychotic symptoms associated with COVID-19 following infection with a new variant of coronavirus. CS is a rare self-perceptual anomaly with the presentation of nihilistic delusions. While the exact pathogenesis of CS remains unexplained, defective mechanisms of proprioception or interoception may lead to a self-misattribution following a perceptual dysfunction which might trigger CS. Although blood tests indicated no systemic inflammation for the index patient, an indistinct neuroinflammatory process may lead to neurotoxicity that might result in perceptual disruption and CS or psychotic features, as suggested in previous reports. Considering well-described anosmia and ageusia with COVID-19 and our case's symptoms after the infection, new variants of SARS-CoV-2 might affect the perceptual pathways. The angiotensin-converting enzyme-2 (ACE-2) receptor which might modulate smell and taste perception, has been identified as a potential viral receptor. Such interaction may disrupt chemosensory perception. Overall, COVID-19 may cause abnormal processing of perceptions. This in turn can lead to anosmia, ageusia and defective proprioception, resulting in self-misattributions as seen in the patient in the current case report who was diagnosed with CS. Clinicians should keep in mind that infections with the rapidly spreading B.1.1.7 variant of SARS-CoV-2 might result in more severe symptoms or long-term consequences of COVID-19 compared to other strains.

**Keywords:** Cotard's Syndrome, COVID-19, Neuroinflammation, Perceptual disorder, Psychotic disorders,

## WILSON'S DISEASE DIAGNOSED WITH PSYCHIATRIC SYMPTOMS: CASE REPORT

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**OBJECTIVE:** Wilson's Disease (WD) is manifest predominantly with liver and neuropsychiatric symptoms. Mood disorders are the most common psychiatric disorder in WD. In our case report, a case of Wilson's Disease, which was first diagnosed with manic episode during hospitalization in the psychiatry ward, will be discussed. Informed consent was obtained from the patient for the case report.

**CASE:** A 25-year-old male patient, who has been followed up with the diagnosis of bipolar affective disorder since 2016, was referred to the Internal Medicine Department with complaints of itching, weakness, and weight loss during his hospitalization in the psychiatry service due to manic episode in 2020. As a result of examination and liver biopsy, he was diagnosed with cirrhosis due to Wilson's disease. Neurological involvement was not detected in the brain and diffusion MRI. At that time, he was using Valproic acid as a mood stabilizer and was discontinued due to liver failure. Kayser-Fleisher ring was not detected in his ophthalmological examination. It was learned that there was no history of bipolar affective disorder in his family history. It was learned that his brother died due to liver failure. After discontinuation of valproic acid treatment, patient was internalized to psychiatry unit with the diagnosis of manic episode with psychotic feature. His treatment was arranged as lithium 1200 mg/day, amisulpride 600 mg/day, and lorazepam 5 mg/day. When extrapyramidal system side effects were detected, biperiden 2 mg/day was added to his treatment. At the beginning of hospitalization, the Young Mania Rating Scale was found to be 24 points. 12 points were determined before discharge. He was discharged with lithium 1200 mg/day, amisulpride 600 mg/day, biperiden 2 mg/day. It was learned that his mood symptoms decreased and he returned to his former functionality in the outpatient clinic controls.

**DISCUSSION:** In our case, WD, which causes liver cirrhosis, was diagnosed and treatment was started after investigation of unclear somatic symptoms such as itching and fatigue in a patient who had no family history of psychiatric disorder and was admitted to the psychiatry ward with the diagnosis of bipolar affective disorder, who lost a sibling due to liver failure at an early age. In 30-64% of cases diagnosed with WD, psychiatric symptoms first appeared. Therefore, it is important to investigate WD in patients presenting with the diagnosis of bipolar affective disorder. Although bipolar affective disorder comorbidity is very common in Wilson's patients, there is still no guideline for the treatment of these patients. Since the neurological involvement of our case was not very evident, we preferred to use amisulpride in order to alleviate the psychotic findings in the treatment, and we managed minimal EPS findings with biperiden. Due to the liver failure of our patient, we preferred to use lithium treatment considering the side effects of tremor. In the planning of treatment in Wilson patients with bipolar disease comorbidity, patients should be evaluated in terms of liver involvement and cranial involvement, and treatment algorithms should be designed according to these attitudes.

**Keywords:** Mood disorders, psychiatric symptoms, Wilson's disease

## ARIPIPRAZOLE INDUCED STUTTERING: A CASE REPORT

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**OBJECTIVE:** Stuttering is the disturbance in the fluency and pattern of speech, characterized by the repetition of sounds, syllables, or words. Developmental stuttering is the most common form and usually begins gradually. It occurs most often among children and between the ages of 2 and 6 when children develop their language skills. Contrary to this developmental stuttering, another form, i.e. acquired or iatrogenic stuttering, can begin at any age and has a sudden onset. A subform of this is neurogenic stuttering, which is associated with brain dysfunction due to stroke, head injury, or other types of brain injury. In addition, another type of iatrogenic stuttering is drug-induced stuttering. In the literature, drug-induced stuttering has been associated with several drugs such as antiepileptics, antidepressants, antipsychotics, and methylphenidate. Several mechanisms, such as an increase in dopamine levels, reduction of GABA, anticholinergic properties of the drugs, or changes in the level of serotonin play a role in the development of drug-related stuttering. Here, we present a case of aripiprazole-induced stuttering in a female depressive patient. We obtained written informed consent from the patient for the case report.

**CASE:** A 46-year-old depressed female patient was on venlafaxine 75 mg/day for three months in our psychiatric outpatient clinic. Aripiprazole 5 mg/day was added to her treatment for anxiety symptoms. The patient presented with acute stuttering after the second day of using aripiprazole 5 mg/day. Neurological examination was normal. We stopped aripiprazole and suggested that the patient come back. After a week, the stuttering disappeared.

**DISCUSSION:** We found two cases of aripiprazole-induced stuttering in the literature. In one case, a 34-year-old schizophrenic female patient developed stuttering after increasing the dose of aripiprazole from 15 mg/day to 30 mg/day and was treated with risperidone. Another case is a 21-year-old female patient diagnosed with schizophrenia. When the aripiprazole was increased from 5 mg/day to 7.5 mg/day, stuttering developed, and stuttering disappeared when decreased aripiprazole to only 5 mg/day. Some studies found that stuttering symptoms can be reduced by dopamine antagonists (haloperidol and risperidone) while increased by dopamine stimulant, the possible role of dopaminergic mechanisms is suggested. Aripiprazole may have caused stuttering through this mechanism in our case. Because aripiprazole acts on both postsynaptic dopamine D2 receptors and presynaptic autoreceptors and is considered as a partial dopaminergic agonist. Paradoxically, we found a case report of a 38-year-old man whose persistent developmental stuttering was treated with 15 mg/day aripiprazole. Therefore, the increased dopaminergic hypothesis is not alone sufficient to explain stuttering. Understanding the pathophysiology of stuttering, inducing stuttering with aripiprazole, and its rapid disappearance of stuttering after discontinuation of aripiprazole are the important results of our case. However, further studies are needed to better elucidate the various variables and doubts accompanying the issue. Dose reduction, discontinuation of the drug, or addition of a drug such as risperidone may be beneficial in the treatment of aripiprazole-induced stuttering. Even sometimes aripiprazole can be used in the treatment of developmental stuttering. The relationship between stuttering and aripiprazole should be considered specific to the patient.

**Keywords:** Antipsychotics, aripiprazole, iatrogenic, stuttering

## ACUTE PSYCHIATRIC SYMPTOMS DUE TO HEREDITARY COPROPORPHYRIA WITH A NOVEL COPROPORPHYRINOGEN OXIDASE GENE MUTATION C.734 C>T: A CASE REPORT

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**OBJECTIVE:** Porphyrrias are a group of inherited diseases that occur as a result of deficiencies of enzymes involved in the heme biosynthesis and progress with multiple attacks. Porphyrrias may initially show psychiatric symptoms such as mood changes, anxiety, and psychotic symptoms. In these cases, leaving porphyria out in the differential diagnosis may lead the clinicians to incorrect diagnoses, precipitate multiple attacks, increase hospitalization rates in psychiatry wards. In our presentation, we aim to present a case of porphyria with psychiatric symptoms.

**CASE:** An 18-year-old, male, imprisoned for multiple crimes, was sent to our forensic inpatient clinic due to his bizarre thoughts and behaviours. He claimed to be enchanted by lamps in the prison he had been in and he thought he was dead and resurrected, that he had disorganized speech and aggressive behavior.

According to his family he became introverted, did not leave the house, thought that he might be harmed, and his need for sleep decreased in the last 6 months. In his mental examination, speech amount was increased, he had emotional elevation, stated the presence of visual hallucinations, he gave circumstantial answers to questions, his associations tended to loosen, his thought content included grandiose and mystical delusions, and his psychomotor activity increased.

Valproic acid and olanzapine was administered due to his mood symptoms. During the follow-up, the patient's visual hallucinations continued, his amount of speech decreased and his elevated affect partially subsided. Later on he had abdominal pain and constipation. Upon the development of hyponatremia, sodium was corrected for an appropriate time and rate, and psychotropic drugs were gradually tapered off. Blurred consciousness and a tendency to sleep were observed in addition to his blunted affect. He had a prolonged response latency, an autonomic instability and encopresis. Blood ammonia level was in normal range and no pathological findings were observed in cranial imaging.

Slow wave activity and diffuse slow waves in the bitemporal delta frequency, prominent in the left temporal region, were reported in the EEG, consistent with encephalopathy. No significant results were obtained in his LP. Despite a slightly increase in his liver function tests, no pathological results were found in further hepatic examinations.

With a clinical suspicion of porphyria, his urine sample was kept waiting for three days, and its color changed from yellow to red. It was learned that he had photosensitivity and that his parents were relatives. Urine uroporphyrin, coproporphyrin1.3, ALA, uroporphyrin levels were all increased. After the CPOX gene analysis, the patient was considered to have hereditary coproporphyrria. His symptoms regressed after hydration and a diet rich in carbohydrates. Informed consent was obtained from the patient for the case report.

**DISCUSSION:** Several subtypes of porphyrias may present with neuropsychiatric symptoms. Hereditary coproporphyrria is the rarest among these three subtypes. This case, which only presented psychological signs and symptoms, accompanied by neurological and gastrointestinal symptoms, showed resistance to medications. This demonstrates the importance of evaluating porphyria, in the differential diagnosis of patients with these clinical signs and clinical worsening after the use of psychotropic drugs.

**Keywords:** hereditary coproporphyrria, porphyria, psychosis, mood disorder

## IMPROVEMENT OF PSYCHOSIS WITH ANAKINRA: A RARE CASE OF FMF AND SCHIZOAFFECTIVE DISORDER COMORBIDITY

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**OBJECTIVE:** Psychotic disorders and mood disorders are closely related to immunological and inflammatory pathways. It is known that autoimmune disease comorbidity is high in these psychiatric diseases, but their relationship with autoinflammatory diseases has not been studied. In this case report, we present a patient with a schizoaffective disorder and Familial Mediterranean Fever (FMF) comorbidity who benefited from anti-inflammatory treatment.

Informed consent was obtained from the patient for this case report.

**CASE:** A 46-year-old female patient was brought to our psychosis outpatient clinic by her relatives because of hearing voices, talking to herself, insomnia and suicidal thoughts that started 10 days ago. The patient, who was found to have increased psychomotor activity, reference and persecution delusions, auditory hallucinations, and active suicidal thoughts in her mental state examination, was admitted to our service. The patient, whose first complaints started at the age of 17, had a total of 13 hospitalizations with bipolar disorder and schizoaffective disorder diagnoses. Her last hospitalization was 1 year ago in our clinic and she had been on clozapine 250 mg/day and lithium 600 mg/day treatment since her discharge. In addition, she had a diagnosis of FMF since she was 10 years old, and she was using colchicine 900 mg/day. Also she had persistent diarrhea that started 2 years ago and the cause of which could not be determined. In the routine laboratory tests of the patient, there was no pathology except for the elevation of CRP. Her treatment was started with lithium 900 mg/day and clozapine 300 mg/day and ECT was planned. On the 10th day of her hospitalization, neutropenia developed and clozapine was discontinued and amisulpride 1200 mg/day was started. On the 23rd day, the patient was consulted to rheumatology department due to the development of vasculitis-related rash on her right lower extremity. During this time, although she received 5 sessions of ECT, her psychotic and affective symptoms had still continued. Rheumatology department thought the rash was due to FMF and stopped colchicine and started anakinra treatment. After anakinra treatment, the patient's CRP level, rash and diarrhea rapidly regressed. It was observed that psychotic and mood symptoms also improved in parallel with this treatment. She was discharged with remission on the 35th day of her hospitalization.

**DISCUSSION:** In this report, we presented a case of schizoaffective disorder whose resistant psychotic and affective symptoms were controlled after anakinra initiation. In addition, the rapid cycling feature of the patient's mood attacks was also broken after anakinra treatment. Anakinra, a monoclonal antibody, is known to be a recombinant interleukin 1 (IL-1) receptor antagonist. IL-1, a pro-inflammatory cytokine, plays a role in the pathogenesis of autoinflammatory diseases such as Familial Mediterranean Fever. It is also known that endogenous IL-1 receptor agonists increase in patients with schizophrenia. The therapeutic effect of anakinra in our case may be due to these roles of IL-1 receptors. Our case is a remarkable report of the use of a monoclonal antibody in the treatment of resistant psychotic and affective episodes.

**Keywords:** Schizoaffective, inflammation, psychosis, anakinra, Familial Mediterranean Fever

## ECT-ASSOCIATED DELIRIUM: A CASE REPORT

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**OBJECTIVE:** Electroconvulsive therapy (ECT), one of the first biological treatment methods in psychiatry clinical practice, is accepted as an effective and safe method in the treatment of depression, mania, schizophrenia and other neuropsychiatric disorders. However, side effects associated with ECT can be seen. Although the underlying mechanisms have not been clarified, neurocognitive side effects such as disorientation, impaired attention and executive functions can also be observed after the seizure. These side effects are thought to be temporary. In this presentation, we presented a case of delirium that developed after ECT in a patient with conversion disorder and major depression.

**CASE:** The patient is 41-year-old, female. She lives with her husband and children, not working. The patient's first complaints started 24 years ago with somatic and depressive symptoms. No physical disease was found to explain the situation in the various departments she went to with these complaints. In 2008, she was hospitalized with the same complaints diagnosis of conversion disorder and depression, and 6 sessions of ECT were applied, and she was discharged with 5 mg/day olanzapine and 40 mg/day fluoxetine with complete remission. In 2010 and 2015, ECT was applied due to similar complaints. The patient discontinued her last treatment, venlafaxine 150 mg/day and quetiapine 100 mg/day. She was admitted to our service after her complaints increased. Considering the diagnosis of conversion disorder and major depression, the patient was started on olanzapine 5 mg/day, venlafaxine 75 mg/day, and lorazepam 2 mg/day. Venlafaxine was increased up to 300 mg/day. Olanzapine was changed to risperidone and increased to 3 mg/day. When the patient's thought rigidity and somatic complaints persisted, 5 sessions of ECT were applied. After the last session, amnesia, agitation, disorientation and cooperation disorder developed. No pathology was found to explain the situation in blood tests and brain imaging. The clinical situation was evaluated as delirium due to ECT, and ECT was terminated and, haloperidol 30 drops/day treatment was started. After 1 week, clinic situation of the delirium resolved completely. The patient was discharged with risperidone 3 mg/day, venlafaxine 300 mg/day, and thyroxine 125 mcg/day. Consent of the patient was obtained for case report.

**DISCUSSION:** Most of the side effects of ECT are thought to be temporary and preventable. In the presented case, delirium was associated with ECT after investigating the organic etiology. One week after ECT was discontinued, the delirium regressed completely. Our purpose in presenting this case was to emphasize that clinicians should keep in mind that delirium may be seen as a side effect in patients who underwent ECT, even if there is an indication for ECT for delirium.

**Keywords:** Delirium, Electroconvulsive therapy, major depression

## A CASE REPORT OF LATE-ONSET PSYCHOSIS IN A PATIENT WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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**OBJECTIVE:** About 2% of people who suffer from systemic lupus erythematosus (SLE) experience psychotic symptoms, and these symptoms often begin early in the disease, especially within 1-3 years. Most of these psychotic symptoms do not recur after treatment. Here, we report that a patient diagnosed with SLE without neurological involvement for 20 years had a psychotic episode in the late stages of the SLE contrary to expectations. The patient was informed about the case report and an informed consent was signed.

**CASE:** A 47-year-old woman applied to our emergency psychiatry outpatient clinic due to persecutory and jealous delusions and related aggressive behaviors that had started about a week ago. The patient was diagnosed with SLE for the first time in 2000 and had been followed for 17 years with a diagnosis of mixed anxiety and depressive disorder. She had used hydroxychloroquine 200 mg/day for the beginning of lupus. Venlafaxine 225 mg/day was prescribed six years ago, and she had been in remission.

Upon mental state examination, severe restlessness and suspiciousness, poor self-care were noted. She had progressive change in her behavior associated with prominent persecutory delusions and decreased sleep. Her delusions were primarily directed at her family. No perceptual pathology was noted during the examination. The patient has been admitted to the psychiatry inpatient service. A malar rash was detected on inspection. Neurological examination showed no abnormalities. Her initial laboratory values, such as electrolytes, liver, and renal functions, were within normal range. Mild leukopenia, which was known to exist in the past, was noted. Zuclopenthixol acetate 50 mg/ml IM injection was given to the patient who was incompatible with the oral treatment and had no insight into her delusions, and risperidone 4 mg/d was added to the treatment. The patient was evaluated as having a psychotic episode and consulted to the rheumatology department for etiology research. Based on cranial MRI and laboratory findings, SLE-related psychosis was not primarily considered, and it was recommended to continue the use of hydroxychloroquine treatment. In this stay, she was transitioned from risperidone 4 mg/d to paliperidone 9 mg/d due to sedation. The patient's delusions were discontinued, and partial insight into the disease occurred in the ongoing process. As her compliance with the treatment increased within one week, she was discharged and referred to the outpatient clinic of our hospital after a three-week stay.

**DISCUSSION:** In patients with SLE, psychotic symptoms may occur either due to neuro-lupus or drugs used to treat it. In addition, exacerbation of the premorbid psychiatric condition may occur due to the disease burden. Nevertheless, psychotic symptoms are constantly expected to occur in the early stages of the SLE or result from high-dose medication. In the present case, who had been followed for an extended period with SLE, was on low-dose hydroxychloroquine, and was middle-aged, and the neuro-lupus diagnosis was also excluded. In the context of this exceptional condition, it can be argued that clinicians should keep in mind that psychotic symptoms may develop at any stage of follow-up of SLE patients.

**Keywords:** psychosis, systemic lupus erythematosus, late-onset psychosis

## PSYCHIATRIC PRESENTATIONS OF UNTREATED HASHIMOTO'S THYROIDITIS: A CASE REPORT

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**OBJECTIVE:** Hashimoto's encephalopathy is an unusual entity that is associated with Hashimoto's thyroiditis. It has been described as a syndrome of encephalopathy and high serum antithyroid antibody concentrations. Syndrome is responsive to glucocorticoid and IVIG therapy. We report here a case of Hashimoto's Encephalopathy which was presented with subacute cognitive impairment and psychosis. Informed consent for the case report was obtained from the patient.

**CASE:** A 32-year-old male patient was brought to outpatient clinic by his relatives with the complaint of subacute onset of short-term memory difficulties which have started 3 months ago. He was taking thyroid hormone substitute for hypothyroidism irregularly for 12 years without any medical history. He has been experiencing referential and persecutory delusions for 2 years. The patient was hospitalized to investigate the organic etiology. The antithyroperoxidase (TPO) and antithyroglobulin (TG) antibody levels were very high (Anti-TG;14906 IU/mL; normal value <115, anti-TPO; 2539 IU/ml; normal value <34). Demonstration of thyroiditis by ultrasonography suggested hypothyroidism could be secondary to Hashimoto's thyroiditis. In first mental state examination; self-care, amount of speech, attention and abstract thinking skills decreased, associations slowed down, affect was blunted. Cognitive functions revealed impairment in attention, executive functions, loss of insight, and deterioration in social relations. The Montreal Cognitive Assessment (MOCA) test score was 17/30. The Cranial MRI was normal and the electroencephalogram (EEG) showed diffuse slowing with delta waves. Cerebrospinal fluid analyses for paraneoplastic and non-paraneoplastic autoimmune antibodies and screening for malignancy were performed which were resolved without any remarkable findings. Anamnesis and laboratory tests confirmed the diagnosis of Hashimoto's encephalopathy. Risperidone was started for psychotic symptoms where IV methylprednisolone was administered 1000 mg/day for 7 days. Since there wasn't any clinically remarkable change, the immune treatment followed by IVIG (400 mg/kg/daily), for 5 days. His clinical status began to improve within 2 weeks after IVIG therapy where apathy and cognitive problems gradually resolved. After 1 month his MOCA score was increased to 30/30 and psychotic symptoms were disappeared.

**DISCUSSION:** Patients with recent-onset progressive cognitive and psychiatric problems can be challenging for clinicians in terms of both diagnosis and treatment. In hypothyroidism due to Hashimoto's thyroiditis, the central nervous system may be affected and psychotic symptoms and/or cognitive disorders may develop. In this presented patient, who was not compliant with regular hypothyroidism treatment, symptoms of psychosis started about 2 years ago were complicated with cognitive problems creating diagnostic challenge.

It should be kept in mind that psychiatric symptoms that may develop associated to Hashimoto's thyroiditis may appear after many years and with new clinical manifestations.

**Keywords:** Hashimoto Thyroiditis, Psychosis, Cognition

## INFESTATION OF INSECTS AND MAGGOTS, EKBOM SYNDROME: A CASE REPORT

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**OBJECTIVE:** Ekbom syndrome is a rare delusional disorder characterized by persistent beliefs that an individual has been infected by parasites, insects, maggots and worms, despite absence of any objective evidence supporting such beliefs. In our article, we aim to contribute to the literature by evaluating the positive response to risperidone treatment in a female patient with Ekbom syndrome and to draw attention to these cases who primarily applied to non-psychiatry clinics.

**CASE:** A 62-year-old female patient, who was treated and followed up for "Major depressive disorder" in our clinic, and whose complaints were in remission, was consulted to our clinic by the otorhinolaryngology clinic. From the clinical history of the patient, it was learned that she repeatedly applied to the dentist, otorhinolaryngology clinic and emergency service with complaints of worms circulating in her mouth and nose, and pinworms between her teeth. After the physical examinations and tests, it was learned that no organic pathology was detected and the case was referred to the psychiatry outpatient clinic.

In the interview held in our clinic, the patient stated that her mouth was constantly filled with worms, insects spread into her nose, the maggots in her mouth were moving her mouth and she felt that they were roaming around her mouth, these maggots were spilling on the ground, and she was checking her stool from time to time to see if there were maggots.

With the diagnosis of "Ekbom syndrome", amisulpride treatment was started and the dose was gradually increased. Since the patient's complaints did not respond to the amisulpride treatment used for a sufficient duration and dose, amisulpride treatment was discontinued and risperidone treatment was started for the patient. It was observed that there was a significant improvement in the complaints of the patient at the current dose of 4 mg/day risperidone.

Consent was obtained from the case to use her medical information.

**DISCUSSION:** Ekbom syndrome was first defined as "acarophobia" and was also referred to as "delusional parasitosis", "delusional infestation" over time, and now, it has been included in the "delusional disorders, somatic subtype" in DSM 5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, American Psychiatric Association). It is more common in women over the age of 50. Antipsychotics, antidepressants, anxiolytics and electroconvulsive therapy can be used in its treatment.

Ekbom syndrome is a psychiatric condition in which patients primarily apply to non-psychiatry clinics such as dermatology, internal medicine, otorhinolaryngology and infectious diseases, so the diagnosis and treatment may be delayed, and the symptoms have a risk of becoming chronic. Although there are few data in the literature, there is a need for large-scale prospective studies related to this disorder.

**Keywords:** Ekbom Syndrome, Delusional Infestation, Risperidone

## HYPERSEXUALITY DUE TO MODAFINIL USE: A CASE REPORT

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**OBJECTIVE:** Modafinil is an agent used in narcolepsy and excessive daytime sleepiness. Modafinil increases brain dopamine levels by blocking the dopamine transporter. When modafinil is examined in terms of side effects, headache, nervousness, anxiety, psychosis, nausea and suicidal ideation have been reported. Although it is known to have a low addiction potential, there are publications suggesting that it is addictive. In addition, when we look at the literature, two cases of hypersexuality related to modafinil have been reported. We will share a case of hypersexuality due to modafinil use.

**CASE:** 24-year-old male patient, followed up with a diagnosis of major depression, is admitted with symptoms of hypersexuality that worsen after using 400 mg/day modafinil. The patient's complaint on admission to our clinic was increased sex impulsivity when the modafinil dose was increased from 200mg to 400mg. Hypersexuality symptoms that developed due to dose increase improved with dose reduction. In order to contribute to the literature, written consent was obtained from the patient for case sharing.

**DISCUSSION:** Hypersexuality that developed as a result of increasing the dose of modafinil to 400mg/day in a patient with major depression with sexual reluctance, and decreased sexual desire and drive due to a decrease in the dose made us think that modafinil caused hypersexuality at high doses in this case. When we look at the literature, two cases of hypersexuality related to modafinil have been reported. Hypersexuality has typically been reported in Kluver Bucy syndrome. Since our patient did not have hypersomnia, hyperorality and hyperphagia, this diagnosis was excluded. Apart from this, it is seen in head traumas, brain operations, frontal and temporal lobe lesions, dementia, stroke, Huntington's disease, Tourette's disease, dopaminergic agents, use of agents such as cocaine and amphetamine. The pathophysiology of modafinil-induced hypersexuality is unclear. The relationship between addictions and hypersexuality is known and hypersexuality is a hyperdopaminergic state. The increase in dopamine in the mesolimbic pathway due to modafinil may explain the development of hypersexuality in our case. As a result, clinicians should keep in mind that modafinil-induced hypersexuality may develop and increase the dose carefully. In addition, it should be kept in mind as an add-on treatment in suitable patients presenting with sexual reluctance.

**Keywords:** Hypersexuality, Modafinil, Psychopharmacology

## AKATHISIA DUE TO BUPROPION: A CASE REPORT

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**OBJECTIVE:** Bupropion is an antidepressant that acts by inhibiting noradrenaline and dopamine reuptake. It is an agent used in the treatment of depression and smoking addiction. Known side effects include headache, insomnia, dry mouth, rash, nausea, excessive sweating, tinnitus, hypertension. In addition, seizures, mania, and psychosis have also been reported. Akathisia is characterized by subjective inner restlessness, feelings of tension, with a compulsive urge to move the lower extremities (shaking, crossing). While akathisia is mostly seen with the use of antipsychotic drugs, it has been observed in recent studies that it can also occur with antidepressant drugs, although less frequently. In a review study, two cases of akathisia due to bupropion were reported. In this article, we will share a case of akathisia due to bupropion use.

**CASE:** A 24-year-old male patient, followed up with a diagnosis of major depression. The patient was started on bupropion 150 mg/day, and control was recommended 2 weeks later. Psychomotor agitated mood in the control examination of the patient. He was anxious, his mood was compatible, his thought content and process were natural, there were no perception disorder, and no manic symptoms detected. In the physical examination of the person, akathisia was found, and there was no other movement disorder. The patient stated that he could not tolerate the drug due to gastrointestinal side effects. Due to these complaints of the patient, the drug was discontinued and vortioxetine 10mg/ day was started, and close follow-up was recommended. It was observed that akathisia resolved in the patient's control examination and there were no side effects. In the long-term follow-ups of the patient, it was observed that she benefited from vortioxetine and her depressive complaints regressed. In order to contribute to the literature, written consent was obtained from the patient for case sharing.

**DISCUSSION:** The pathophysiology of akathisia is still unclear. Akathisia may be overlooked by psychiatrist. Delayed recognition of akathisia can lead to exacerbation of symptoms, treatment non-compliance, and in some cases, suicide. Early recognition of akathisia is very important to prevent possible suicide attempts. In previous studies, tricyclic antidepressants, mirtazapine and fluoxetine cases of akathisia have been reported. Bupropion is known to be metabolized by CYP450. In a study examining the relationship between the CYP450 enzyme system and akathisia, the CYP450 allele variant was higher in patients with akathisia than in the control group. Had our patient's CYP450 genetic analysis been examined, he would probably have a high probability of having one of the alleles that would trigger this akathisia. As a result, we should keep in mind that the side effects of akathisia may develop in the use of bupropion. It is known that especially bupropion is indicated in moderate-to-severe depression. In addition, considering that akathisia can trigger suicide, there will be a chance to prevent in suicidal ideation at an early stage.

**Keywords:** Akathisia, Bupropion, Psychopharmacology

## TREATMENT OF LONG-ACTING RISPERIDONE-INDUCED TARDIVE DYSTONIA WITH CLOZAPINE: A CASE REPORT

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**OBJECTIVE:** Tardive dystonia is a movement disorder that develops with twisting a part of the body or abnormal posture due to severe muscle contractions. The most crucial cause of tardive dystonia is the use of antipsychotic drugs. Tardive dystonia associated with long-term use of antipsychotic medication may be focal, segmental, or generalized. It most commonly starts in the cranial and cervical regions. Once tardive dystonia occurs, it tends to be persistent and complete recovery is usually rare. The aim of this case, which was presented with the patient's consent, is to emphasize that clozapine is one of the treatment options in the treatment of antipsychotic-induced tardive dystonia.

**CASE:** S.A. 51-year-old male patient. He has been followed in our clinic for ten years with the diagnosis of schizophrenia. In 2012, the first complaints of the patient started as social isolation, auditory and visual hallucinations, talking about things that did not exist, and irritability, and he was hospitalized. On discharge, risperidone parenteral 50 mg/two weeks and escitalopram 10 mg/day were prescribed, and his complaints regressed with the current treatment. The patient did not come to the outpatient clinic controls after discharge and continued risperidone parenteral 50 mg/two weeks of treatment. The patient, who did not have psychotic symptoms, applied to our clinic in January 2022 with complaints of contraction in the left SCM muscle and pectoralis major muscle, pain and twisting in the neck, and difficulty swallowing. Risperidone treatment was stopped in the patient who was diagnosed with tardive dystonia, and clozapine treatment was started for his dystonia. When the clozapine treatment was increased up to 250 mg/day, it was observed that involuntary contractions in the SCM muscle and pectoralis major muscle were remarkably decreased, and the neck pain of the patient decreased significantly end of the four weeks. An informed consent was obtained from the patient.

**DISCUSSION:** Many previous studies have shown that clozapine is beneficial for patients with the tardive syndrome in the dose range of 200 to 300 mg/day, and the effects are observed within 4-12 weeks after the initiation of clozapine. In our case, the dose of clozapine was kept 250 mg/day and significant improvement was observed with approximately four weeks of treatment. Although the underlying neuropharmacological changes are not understood, several hypotheses have been proposed to explain tardive dystonia. Serotonergic and noradrenergic regulation of cholinergic pathways has been suggested to play a possible role for patients with tardive dystonia. Another assumption is that repetitive stimulation of the D1 receptor by endogenous dopamine causes sensitization of D1-mediated striatal output in the presence of D2 receptor blockade. The suggestion of clozapine as a possible treatment modality in patients with tardive syndrome is due to its low affinity for striatal D2 receptors and its anti-serotonergic (5HT<sub>2</sub> and 5HT<sub>1C</sub>) and anticholinergic effects. Whatever the mechanism of action, the response to therapy observed in this case proposes that clozapine should be tried in cases of tardive dystonia.

**Keywords:** clozapine, extrapyramidal side effect, long-acting risperidone, schizophrenia, tardive dystonia

## HOW DOES IMMIGRATION AFFECT THE EMERGENCE OF MENTAL DISORDERS?: A CASE OF MOOD DISORDER COMORBID WITH ANOREXIA NERVOSA

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**OBJECTIVE:** Migration, which has been an important problem throughout the history of humanity, continues to wear out individuals psychologically and socially today. Migration complicates the mental health problems of individuals, especially if it takes place after war-violent acts. In this case, we aimed to describe a complex psychiatric picture of a patient who gave us to informed consent for this presentation that started after immigration.

**CASE:** Our patient is 19-year-old, female, medical student and lives in a dormitory. She has no previous psychiatric application and applied to the outpatient clinic with persistent anhedonia, reluctance, depression, and decreased academic performance for 2 months. In her examination, she was moderately self-care, dressed in loose clothes, her affect was depressed, speech rate and tone of voice decreased, reaction time was partially prolonged, associations were regular, sleep was irregular, appetite decreased (but the patient don't suffered from it.), it was evident that self-esteem decreased in opinion content. According to the information we got from her story she is Syrian origin, her family moved to Istanbul about 5 years ago. His older brother moved to Germany before them, and then he had recurrent psychiatric hospitalizations with the diagnosis of Bipolar Disorder. She knows that her brother used olanzapine and then became obese. She describes the migration process as a disappointment. She had difficulties in adapting to life in Turkey. While in high school, she was socially isolated, tended to religious subjects, and described as depressive. Once she attempted suicide by taking drugs. The patient, who weighed 60kg when she came to Turkey, started to lose weight gradually and her thoughts about his body intensified. Last spring, she had a period when she felt very self-confident, had less need for sleep, had irregular sexual relations, used alcohol and drugs for the first time, and decided to become an atheist. The patient, whose depressive symptoms were predominant at the first interview, stated that she was very afraid of gaining weight constantly calculating calories. While making us think about a possible affective condition due to the patient's family and past history, her condition also met for anorexia nervosa according to DSM-5 (height 1.65cm, 44kg, BMI 16.2 moderate-type). Her HAMD is 41 (severe depression), HAMA is 11 (minor anxiety) and MMPI resulted as defensive-normal. The patient was willing to treat but didn't want to use olanzapine. Her treatment was started with bupropion 150mg/day and after the depressive symptoms decreased, treatment was switched to aripiprazole 5mg/day and melatonin 3mg/day. Weight gain, decrease in body image and food-related obsessions, accompanying depression and increase in cognitive flexibility were observed with the use of aripiprazole.

**DISCUSSION:** The phenomenon of migration is a source of intense stress for the individual. In the post-migration period, cultural differences in the new society can be extremely determinative in the individual's adaptation problems and the appearance of psychiatric situations. We wanted to emphasize that we may encounter complex psychiatric conditions in our country, especially due to the increasing immigrant population in recent years, and that these situations should be investigated more comprehensively.

**Keywords:** adaptation, anorexia nervosa, migration, mood disorder

## EXPLORING THE GENDER GAP AT THE 57TH NATIONAL CONGRESS OF THE PSYCHIATRIC ASSOCIATION OF TURKEY: A RETROSPECTIVE INVESTIGATION OF FEMALE REPRESENTATION

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**BACKGROUND AND AIM:** Although the proportion of women in science has substantially increased over the last century, women remain underrepresented in academia, especially at senior levels. In addition, their scientific achievements do not always receive the same level of recognition as do men's, which can be reflected in a lower relative representation of women among invited speakers at conferences or specialized courses. Our goal was to describe the proportion of female representation among speakers and moderators at the 57. National Congress of the Psychiatric Association of Turkey (57NC-PAT).

**METHODS:** The public conference program of the 57NC-PAT was obtained online. Three independent researchers coded sessions and presentations. The concordance between coders was 100%. No ethics approval was needed since we used publicly available data. Since the data were not normally distributed, we present our results as median and quartiles.

**RESULTS:** We retrospectively evaluated a total of 19 courses, 61 panels, 14 conferences, 29 other sessions, 77 poster presentations, 33 oral presentations, eight oral presentations as nominees for the award. Females presented as following mean percentages: 50 (0-100) for courses, 60 (0-67) for panels, 0 (0-100) for conferences, 50 (33-71) for other sessions, 50 (38-100) for poster presentations, 50 (33-90) for oral presentations, 100 (100-100) for oral presentations as nominees for the award. According to data, women were equally represented among sessions. Sessions that had "only male" or "only female" speakers compared: panels (29.5% vs. 14.8%), courses (36.8% vs. 26.3%), conferences (57.1% vs. 28.6%) had higher percentages of only male versus only female teams. On the other hand, poster presentations (11.7% vs. 31.2%), oral presentations (6.1% vs. 24.2%), and oral presentations as nominees for the award (12.5% vs. 87.5%) had "only female" teams more frequently than "only male" teams. There were 18 foreign speakers at the congress; only 22% were women.

**CONCLUSIONS:** Compared to male scientists in the scientific community, the lower visibility of female scientists stems partly from presenting research as an invited speaker at organized meetings. Although the gender gap among speakers at the 57NC-PAT was narrow, we must remain cognizant of its presence, especially regarding high-ranked positions, including moderators of sessions. Therefore, we must continue to work towards equal representation.

Simple rules may be followed to achieve gender balance for future meetings. Although individual contributions such as mentoring, sponsorship, or speaking up about inequity are invaluable, a significant change likely requires organizational initiatives. Furthermore, a potential starting point might be gender parity on program committees.

**Keywords:** gender equity, gender disparity, gender gap, academic psychiatry, medical conferences, medical congress

## WHAT IS GOING ON IN MY HEAD? A CASE REPORT: EXPLODING HEAD SYNDROME

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**OBJECTIVE:** In our article, it is aimed to increase the low awareness level of the diagnosis of "Exploding Head Syndrome", which is not included in the classifications and is one of the other parasomnias, accompanied by a case report.

**CASE:** A 45-year-old male patient applied to our outpatient clinic with complaints of increasing malaise, unhappiness, reluctance, amnesia, and suicidal thoughts for the last ten years.

His depressive complaints regressed during the follow-up of the patient, whose treatment was started with the diagnosis of "major depressive disorder". However, it was learned that he had complaints of hearing voices, which he described as a train crash or explosion and emerged with the increase of psychosocial stressors, while falling asleep, night fears due to these sounds, and difficulty in falling asleep. It was learned that the sounds sometimes occur 1-2 times a year, and sometimes they do not occur at all. No pathological finding was detected in the cerebral magnetic resonance imaging of the case. After the clinical history and psychiatric examination, the diagnosis of "Exploding Head Syndrome" was considered.

Consent was obtained from the patient to use his medical information.

**DISCUSSION:** "Exploding Head Syndrome", which is classified as a parasomnia, was first defined as "sensory discharge" by doctor Silas Weir Mitchell in 1876, however, this syndrome was clinically described as "brain explosion" only in 1920. The term "Exploding Head Syndrome" was first used by physician J.M.S. Pierce in his article published in the Lancet in 1988. In the literature review, it is seen that the individuals affected by this condition applied with the complaints of loud sounds resembling explosions or gunfire in their heads that occur during falling asleep. This condition is not as serious as it seems, but it can cause sleep disturbance in individuals. The exact etiology of Exploding Head Syndrome is unknown. Factors such as extreme fatigue and increased stress can make an individual susceptible to sleep-related disorders or parasomnias. It can be seen as a single attack throughout life or several attacks in one night. In the treatment, it is necessary to inform the patients about the diagnosis and to relieve the concerns of the patients. There is no need for medication.

**Keywords:** Parasomnia, Exploding Head, Sleep

## LOW DOSE OLANZAPINE AND RISPERIDONE CAUSE DRY EYES, BUT NOT AMISULPRIDE: A CASE REPORT

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**OBJECTIVE:** Dry eye is an ocular surface disorder associated with tear film abnormalities and potentially significant discomfort caused by burning or foreign body sensation, chronic injected eye, increased blinking, or ocular fatigue. It is a multifactorial disease, and one of the most prevalent eye diseases, particularly among the elderly. Drug-induced dry eye is most often associated with drugs that exhibit anticholinergic effects by blocking muscarinic and nicotinic receptors. Anticholinergic side effects of antipsychotic drugs has long been known. Low-potency classical antipsychotics and clozapine are highly likely to cause anticholinergic effects; olanzapine and quetiapine have been shown to do so at high dosages. In this case report, we present a case of dry eye that developed as a result of low dose olanzapine use and improved after switching to amisulpride monotherapy. The patient and his family agreed to participate in the study.

**CASE:** A 41-year-old, male patient. He was being followed up in the outpatient clinic with the diagnosis of schizophrenia and was in remission with low dose olanzapine (5 mg/day). He has no history of taking any other medication. However, the patient was admitted with the complaints of eye blinking, burning sensation in eyes, sensitivity to light increasing over the past year. He was consulted an ophthalmologist and was diagnosed as having "dry eye". Therefore, his medication was switched from olanzapine to risperidone (3 mg/day). However, dry eye symptoms persisted. Thereafter, his new treatment protocol was changed to amisulpride monotherapy (600 mg/day). Four weeks after changing to amisulpride, the patient was re-examined. It gave complete relief and the ophthalmology consultation reported that the dry eye improved. No recurrence was noticed thereafter. Also, remission in schizophrenia symptoms continued.

**DISCUSSION:** Anticholinergic agents play an important role in ocular dryness because of hypo-secretion. Olanzapine which has strong anticholinergic and/or antiadrenergic effects can cause ocular side effects at high doses. Despite lower doses, the patient developed dry eye syndrome with olanzapine treatment. So his medication was switched to risperidone. Risperidone is a potent antagonist at 5-HT<sub>2a</sub> and D<sub>2</sub> receptors. It also demonstrates relatively high affinity for alpha<sub>1</sub> and H<sub>1</sub> receptors but low affinity for beta-adrenergic or muscarinic receptors and causes much weaker anticholinergic effects. However, dry eye symptoms could not be improved. Dry eyes can be resolved by decrease or discontinuation of the active ingredient of the medication responsible. In this patient, we decided to use amisulpride instead of drugs with anticholinergic side effects. Amisulpride is a benzamide with high affinity for dopamine D<sub>2</sub> and D<sub>3</sub> receptors without affinity for serotonin, muscarinic or alpha-adrenergic receptors. The patient's eye complaints improved and remission in schizophrenia symptoms continued. Few psychiatrists routinely screen patients for dry eyes. Thus, this condition often goes unrecognized and untreated, but it can significantly affect patients' quality of life and cause ocular and medical health problems. It is crucial for psychiatrists to be aware of potential problems related to dry eyes and the impact it can have on their patients.

**Keywords:** Olanzapine, Dry Eye, Anticholinergic, Risperidone, Amisulpride, Injected Eye

## VENOUS THROMBOEMBOLISM DURING TREATMENT WITH ANTIPSYCHOTICS: A CASE REPORT

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**OBJECTIVE:** Venous thromboembolism is one of the rare but important side effects that may occur due to the use of antipsychotic drugs. The risk appears to be highest in the younger group of patients and early in treatment and is likely dose related. In this case, we described a 32-year-old male patient who developed pulmonary thromboembolism due to deep venous thrombosis at the second year of risperidone use.

**CASE:** A 32-year-old male patient applied to the psychiatry clinic six years ago with paranoid delusions and auditory hallucinations. Aripiprazole 10 mg was started for the patient with the diagnosis of first episode psychosis. The patient had no history of substance use. Since the patient's complaints did not improve with aripiprazole, aripiprazole was discontinued and risperidone 1.5mg was started. Due to the improvement in the patient's clinic, the dose of risperidone was increased to 4mg. The patient was diagnosed with schizophrenia. After one year, the patient stopped taking his medication. He did not use drugs for three years, did not have any psychotic symptom. In 2019, when the patient started new job, his psychotic symptoms recurred, and he applied to the psychiatry clinic. Risperidone was started at 3 mg, and then reduced to 2 mg in controls. The patient gained 25 kilograms during the one-and-a-half-year period of using risperidone. In December 2020, he applied to the emergency service with complaints of palpitations in the heart, pain in the legs for a month, and difficulty in walking. The patient who applied to the emergency department was diagnosed with deep vein thrombosis and pulmonary embolism and was admitted to the cardiology department. The patient had no history of travel, trauma, febrile illness, rheumatologic disease, and no family history of thromboembolism. All examinations for the etiology of thromboembolism were performed.

Risperidone use was considered as the cause of deep venous thrombosis. The patient was consulted to the psychiatry clinic and risperidone was discontinued. Monthly control was planned. In the 7th month of the control, psychotic symptoms recurred and haloperidol 5mg was started.

**DISCUSSION:** The biological mechanisms explaining the increased risk of venous thromboembolism in patients using antipsychotic drugs are not fully known. It is an issue that needs to be clarified to what extent antipsychotic treatment and the pathological processes of the disease requiring this treatment contribute to the increased risk of thromboembolism. Our patient gained a lot of weight during antipsychotic treatment. However, venous thromboembolism does not develop in every young patient who has weight gain. Since the antipsychotic treatment and increased body weight pose a risk for DVT or PTE, a risk assessment should be done in patients using antipsychotics regardless of their age. As the conditions change the risk changes, therefore patients should be evaluated before starting an antipsychotic and frequently after as a part of routine physical check.

Informed consent was obtained from the patient for publication of this case report.

**Keywords:** psychosis, risperidone, venous thromboembolism

## NEW-ONSET MANIA FOLLOWING COVID-19 REINFECTION: A CASE REPORT

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**OBJECTIVE:** After the coronavirus pandemic has started in 2019, many consequences related to this disease have been defined, but the possible consequences of the disease from a psychiatric point of view still remain unclear. Since there are literature studies showing that mood disorders may be associated with infectious etiologies, in this study, the manic episode that started after the last Covid-19 positivity of the patient who had 2 coronavirus positivity periods with an interval of 5 months will be presented.

**CASE:** A 41-year-old female patient was brought to the emergency department of our institution by her relatives with complaints of meaningless talking and aggression. In the history taken, it was learned that the person had had symptoms such as elevated mood and aggression for 2 weeks. It was learned that the person was hospitalized due to Covid-19 PCR positivity about 20 days before these symptoms started. It was learned that there was another Covid positive period about 5 months before this hospitalization, and that she had a history of inpatient treatment in both periods. It was learned that the infection markers (crp, procalcitonin, wbc) of the person between these two positive periods became negative. It is known that the patient did not have any psychiatric findings until 2 weeks ago. The patient was evaluated in the emergency room and admitted to our inpatient unit in order to clarify the risk of harming herself or anyone else and to arrange treatment. Olanzapine 15mg, zuclopenthixol depot injection treatment was arranged, and lithium treatment was added after the first week of her hospitalization and dose adjustment was made. The hospitalization Young Mania Score of the patient was calculated as:43 and PANSS score as: 97. After 33 days of treatment in the psychiatry inpatient unit of our institution, she was discharged with olanzapine 15mg 1\*1 and lithium 300mg 3\*2 treatment, and at discharge the patient was evaluated with Young Mania Scale and PANNS, scores as 3 and 70, respectively. It was observed that the patient, whose outpatient clinic controls continued, has been euthymic and had no psychotic symptoms, and her functionality has improved. The patient has no family history. We obtained written informed consent from the patient and from her first-degree relative.

**DISCUSSION:** With this case report, we aimed to contribute to the literature on infectious etiologies of mood disorders by sharing our clinical experience on the development of new mood episodes after Covid-19 infection. Although it is taken into account that this mood episode of the person may be completely incidental, our knowledge in this field will increase as the literature on infectious etiologies especially about Covid-19 increases. A limited number of cases of psychosis and manic episodes that started after Covid infection have been reported in the literature, and further studies are needed on the neuroimmunological effects of Covid and the disease.

**Keywords:** Bipolar Disorder, Mood Disorder, Manic Episode, Covid-19

## EFFICACY OF HIGH DOSE THIAMINE TREATMENT IN WERNICKE-KORSAKOFF SYNDROME: A CASE REPORT

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**OBJECTIVE:** Thiamine is essential for proper nerve functioning and glucose metabolism. The daily thiamine requirement for a healthy individual is 1-2 mg. Thiamine can be stored up to 30-50 mg thus in 4-6 weeks thiamine deficiency occurs if thiamine intake is insufficient. Wernicke-Korsakoff syndrome (WKS) is a syndrome combining two disorders, Wernicke encephalopathy and Korsakoff psychosis, that occurs due to thiamine deficiency. If Wernicke encephalopathy is left untreated, it transitions to the Korsakoff syndrome which main symptoms are confabulation, memory loss, gait abnormalities. In this case report, importance of diagnosis and treatment of Wernicke encephalopathy before Korsakoff syndrome occurs, and efficacy of thiamine treatment in a Wernicke-Korsakoff patient are discussed. Informed consent was obtained from the patient.

**CASE:** A 57-year-old male, married with 5 children, living with his wife, unable to work was brought to our outpatient clinic by his wife. His complaints were meaningless speech, loss of appetite, urinating and defecating in the rooms of the house, searching for objects on the walls, making up the names of their children since last 10 months.

According to information received from his family and medical records; our patient was consuming 50cc alcohol daily for 40 years and he stopped drinking abruptly a year ago. 1 month later, benzodiazepines were prescribed for detoxification at his first admission to psychiatry clinic. 3 month later, at neurology clinic, his neurological exam findings were horizontal nystagmus, dysdiadochinesia, limited cooperation. Thiamine was not prescribed in any of his admissions.

Patient's mood was apathetic and his affect was restricted. Short-term memory was affected. Impulse control was insufficient. Mini-mental state score was 2, he was naming all the objects as "pen". He was making up his children's names. Patient's gait was ataxic, nystagmus was absent in our examination. T2/FLAIR MRI scan of brain was consistent with Wernicke-Korsakoff Syndrome.

Patient was treated with IV thiamine 800 mg for 5 days. After IV treatment was stopped, IM thiamine 100mg, IM hydroxocobalamin 100mg, IM pyridoxin hydrochloride 100mg, oral folic acid 5mg, oral Vitamin B complex containing 100mg thiamine and olanzapine 2,5 mg was added to treatment. By the 2nd week on his hospitalization, his orientation improved in all 3 parameters. His Mini-Mental State Score was 19. He was able to name all of their children correctly and could tell the job he was doing in details.

**DISCUSSION:** If Wernicke encephalopathy is left untreated, %80-90 of the cases transition to the Korsakoff syndrome. Delayed diagnosis increases the morbidity and mortality rate. So it is important to diagnose WKS to replace thiamine as early as possible. As in our case, if it has already transformed to WKS, rapid and high dose replacement of thiamine may result in noticeable improvements symptoms after only 2 weeks.

**Keywords:** Wernicke-Korsakoff Syndrome, alcoholism, thiamine deficiency

## IS ONCE A PSYCHIATRIC PATIENT ALWAYS AND ONLY A PSYCHIATRIC PATIENT?

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**OBJECTIVE:** The present case report aimed to emphasize the stigmatization of psychiatric disorders and remind us to consider the underlying organic pathologies.

**CASE:** M.S. was a 49-year-old female patient diagnosed with schizophrenia for ten years, hospitalized two times before and used the same treatment for seven years, zuclopenthixol depot and quetiapine.

Approximately 40 days ago, she and the other family members started suffering from fatigue, nausea and vomiting. Although the other members recovered in 7-10 days, her symptoms had worsened. Accordingly, she visited several departments of different clinics such as internal medicine, infectious diseases, general surgery, and cardiology; after being internalised for gastrointestinal infection she was discharged. When the patient's symptoms were aggravated, she was lethargic, stopped eating, started provoking herself to vomit, lost weight, and had hand tremors. For these reasons, the patient was consulted to the psychiatry outpatient clinic and she was internalized by us. Blood and urine analyzes, brain magnetic resonance imaging (MRI) and electroencephalography (EEG) examinations were planned for the exclusion of possible underlying organic pathologies and other differential diagnoses.

As a result of the examinations, significant hyperthyroidism and mild electrolyte imbalance were detected in the patient. Thyroid ultrasonography (USG) was planned for the patient by endocrinology, methimazole and propranolol treatment was arranged. Zuclopenthixol depot and quetiapine were discontinued. Instead, haloperidol and biperiden treatments were initiated.

After 40 days of hospitalization, no psychotic episode symptoms or findings of hyperthyroidism were detected in the patient. She was discharged with cure and suggestions.

Consent was obtained from the case to use her medical information.

**DISCUSSION:** Hyperthyroidism occurs when the thyroid gland produces too much thyroxine. The most common symptoms are heat intolerance, weight loss, tremor, anxiety, diarrhea, and recommended therapy consists of methimazole or propylthiouracil, beta-blockers, radioactive iodine, or thyroidectomy.

The fact that antipsychotics might cause thyroid function abnormalities and injectable forms are harder to control is why we stopped zuclopenthixol depot and quetiapine. Haloperidol is recommended to control nausea and vomiting, which is the reason we switched to this therapy for the patient with both hyperthyroidism and schizophrenia.

Once a patient is diagnosed with a psychiatric disorder, the general approach is to consider any symptom due to this condition. These disorders, such as psychotic episodes, mental retardation, or mood disorders, might occur through the rejection of eating, lethargy, fatigue, or provoked vomiting, are also possible to be developed due to organic pathologies, including infections, encephalitis, hormone dysregulations, electrolyte imbalances and people with psychiatric disorders might suffer from the organicities as well. Our duty as medical professionals is to examine every patient holistically before describing the findings as "disorganised behaviour".

**Keywords:** Hyperthyroidism, Schizophrenia, Stigmatisation

## THERAPEUTIC ROLE OF PSYCHOSOCIAL INTERVENTIONS AND COMORBIDITY-FOCUSED THERAPIES IN THE MAINTENANCE TREATMENT OF METHAMPHETAMINE USE DISORDER: A CASE REPORT

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**OBJECTIVE:** Methamphetamine is a highly addictive central stimulant with extensive and strong neurotoxicity. Its use causes mental health problems ranging from anxiety, aggression, and depression to acute paranoid psychosis. Methamphetamine abuse continues to increase worldwide, based on morbidity, mortality. In this case, the combination of pharmacotherapy, psychotherapy and psychoeducation applied for the remission and maintenance treatment of a patient with multiple substance use will be shared. Consent was obtained from the patient for case sharing.

**CASE:** A 42-year-old male patient, single, lives alone. He applied to the outpatient clinic with complaints of insomnia, distress, and visual psychotic symptoms due to methamphetamine use. He stated that he used cannabis, synthetic cannabinoids, heroin, cocaine, ecstasy and clonazepam throughout his life. The patient had 5 hospitalizations, especially with heroin withdrawal symptoms. The patient, who has been using substances since the age of 17, received maintenance treatments with buprenorphine, naloxone, and naltrexone after hospitalizations, but the longest abstinence period was 1 month. There was HCV positivity thought to be transmitted from injectors. He was caught for heroin dealing and spent 10 years in prison. He stopped using heroin 1 year ago because he thought it had reached lethal doses and started using methamphetamine during the abstinence period. The patient, who had been using only methamphetamine for 1 year, was using 4-5 grams per day. Methamphetamine positivity was found in the urine substance test at his admission. On the first day of his hospitalization, a frame was drawn as 6 individual psychotherapy interviews per week, including "motivational interview", "psychoeducation", "reasons for drinking", "family-based therapy" and "coping skills strategies" and applied for 3 weeks. Additionally, group therapies such as "SAMBA" and "12-Step Program" were added. Pharmacotherapy was arranged as aripiprazole 5mg/day and NAC 1800mg/day. Paroxetine 20mg/day was given to the patient with depressive symptoms. Risperidone 25mg depot treatment was started due to impulsive features such as a history of suicide attempts and frequent forensic events. All medical problems such as sleep apnea and HCV positivity were consulted to other departments. The "Substance Craving Scale" score was found "26" on the first day of hospitalization. At discharge, the scale score was "0". Before discharge, interviews were held with his family and himself on "regular working life, social support, resilience and stable housing". Follow-up continues with a 6-months abstinence period.

**DISCUSSION:** Methamphetamine use disorder is a diagnosis that is usually encountered in patients who use multiple substances. It attracts attention with its rapid increase in prevalence and lack of pharmacotherapy. Opioid use disorder is often found in history. In this case, a stimulant use disorder developed during withdrawal of CNS-suppressing opioidergic heroin. Aripiprazole was used in drug treatment, but non-compliance with treatments was noted in history. Compliance resistance was broken with therapeutic cooperation. Our focus was on quality of life, psychoeducation for himself and his family, and comorbid medical and psychiatric diagnoses. The therapeutic role of "interviews questioning reasons for drinking", "family/friends interviews", "emotional regulation" and "coping skills strategies" is at least as important as pharmacotherapy in maintenance treatment.

**Keywords:** Methamphetamine, Psychosocial interventions, Psychoeducation, Maintenance treatment, Substance use disorder, Non-medication treatments

## A CADASIL CASE PRESENTING WITH EMOTIONAL INCONTINENCE

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**OBJECTIVE:** Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL) is a genetic disease that affects small blood vessels in the brain, resulting in insufficient blood flow to certain areas of the brain. This disease causes multiple ischemic infarcts and variable symptoms depending on the location of the lesions. The first clinical manifestation of CADASIL in young adults is mostly migraine attacks. Subsequently recurrent subcortical ischemic attacks lead to neurological deterioration, frontal-type dementia, and depressive-type psychiatric disorders. It is characterized by migraine, stroke, mood disorders and cognitive decline. Symptoms and presentations may differ from this set of basic criteria. In this report, accompanying emotional incontinence in a case diagnosed with CADASIL is discussed. Consent was obtained from the patient.

**CASE:** A 42-year-old female patient had migraine, diagnosed with CADASIL about two years ago, applied to us with the complaints of crying and laughing attacks for no reason. Three months ago, this complaint started after an ischemic stroke. About five years ago, the patient, who had applied to the psychiatry service with anxiety disorder, was observed to be intensely anxious and accompanied by depressive symptoms. In addition, neuropsychological tests have shown that short term memory was affected (MMSE: 28, MOCA: 24). The patient's treatment was arranged as sertraline 100 mg/day.

**DISCUSSION:** Neuropsychiatric manifestations of CADASIL include depression, anxiety and apathy in particular. The best known emotional disorder is depression. In large cohort studies, it has been shown that 20-30% of patients experience major depression and 28-44% are diagnosed with cognitive impairment. On the other hand, although symptoms are highly variable, other disorders such as emotional incontinence and anger management problems, which are frequently seen in stroke patients, have been rarely studied in CADASIL patients. Mentioned emotional incontinence is a disturbing syndrome characterized by uncontrollable exaggerated, involuntary bursts of facial expressions resulting in pathological crying or pathological laughter. Although the etiology and specific neurotransmitters involved are still under investigation, evidence suggests that serotonin plays a primary role. Therefore, it seems reasonable to use sertraline in the treatment of patients with emotional incontinence.

**Keywords:** CADASIL, Emotional incontinence, demantia

## AN ACUTE ONSET PSYCHOTIC DEPRESSION CASE FOLLOWING COVID-19: TREATMENT CHALLENGES AND SHORT-TERM STEROID SUCCESS

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**OBJECTIVE:** Coronavirus disease 2019 (Covid-19) commonly causes respiratory tract involvements, but can also lead to non-respiratory presentations, including psychiatric complications. While it is relatively rare, acute onset psychosis can also be developed following the infection. The exact mechanisms of Covid-19 to cause psychosis and what treatment options should be applied remain unclear. Here, we report a case of acute onset psychotic depressive episode following Covid-19 in an elderly patient without a significant psychiatric and medical history, and also discuss short-term steroid as a treatment option. A written and signed informed consent was obtained to be able to present and publish this case.

**CASE:** A 67-year-old woman, who had a history of clinical recovery from Covid-19 two months ago, presented with acute onset psychotic and depressive symptoms that led to a suicide attempt. While she did not have a significant psychiatric and medical history before, she had strong delusions of guilt at the time of her admission to psychiatry, following the suicide attempt. She thought that she had caused the death of her children by infecting them with SARS-CoV-2, although her children were alive. She also believed that she would be prosecuted, imprisoned and televised for causing her children's death. Her Beck Depression Score was 62 with her depressive, anxious mood and an irritable, a bit blunted affect. The patient was diagnosed as psychotic depression and hospitalized. After hospitalization she developed persecutory delusions about the health personnel and Capgras delusion about her children who visited the psychiatric ward. The symptoms were intractable and resistant to high doses of combined psychotropic medications. And also the brain imaging revealed widespread vascular pathologies that seemed to be developed recently. A short-term methylprednisolone treatment was started. Interestingly, all her persistent symptoms resolved completely just after this treatment.

**DISCUSSION:** Acute onset and resistant psychotic and affective symptoms following Covid-19 in an elderly patient without a significant psychiatric and medical history, the extremely rapid recovery of these resistant symptoms with only additional short-term methylprednisolone treatment and also the presence of the recently developed diffuse vascular pathologies of the brain support the view that Covid-19 seems to be able to cause brain involvement and neuroinflammatory effects. However, it is an undeniable fact that we need further investigation methods to demonstrate the direct presence or neuroinflammatory consequences of the novel coronavirus in the brain. Despite these limitations, our case contributes to the increasing evidence available and suggests that steroid treatment may be an option in treatment-resistant cases.

**Keywords:** Brain, Covid-19, delusion, depression, inflammation, psychosis

## PSYCHOTIC DISORDER ASSOCIATED WITH LYSERGIC ACID DIETHYLAMIDE: A CASE REPORT

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**OBJECTIVE:** d-Lysergic Acid Diethylamide (LSD) was first synthesized in 1937 by Albert Hoffman. LSD produces changes in body perception, synaesthesia, thought disorders, and time distortion. LSD has potent psychotropic effects, described as inducing "mystical experiences"; alterations of the state of consciousness, euphoria, enhanced capacity for introspection, altered psychological functioning, a sense of unity, transcendence of time and space, and positive mood; feelings of joy, blessedness and peace; a sense of sacredness; and a positive attitude towards others and the self. LSD was used in the treatment of anxiety, depression, psychosomatic diseases and addiction. Generally speaking, LSD at relatively high doses produces a state of transient psychotic-like state, but in some vulnerable subjects can produce a psychosis. In this case report, we will present a case of psychotic disorder due to the use of LSD.

**CASE:** A 26-year-old, single, university graduate, female patient was brought to the psychiatry outpatient clinic at the request of her family. Recently, she has had episodes of crying, withdrawing, loss of appetite, irritability and anger during the day. About a week ago, there was a suicide attempt by hanging. The patient had symptoms such as insomnia, behavioral changes, and increased metaphysical pursuits. The patient painted her face with paints, went out at night, jumped into the snow outside, and increased mobility. After taking a bath last night, she cut her long hair in a crooked way with scissors. She started to think that there was something in the food at home and her doubts started to form. She had these complaints for about 3 months. She has no history of psychiatric diagnosis and treatment in his past medical records. It was determined that the patient had a history of using LSD for 8 months at regular intervals, the last time being approximately 1 year ago. It was learned that she had used cannabis before. It was decided to admit the patient to the psychiatry clinic. In the emergency room conditions, haloperidol 5 mg, biperiden 2.5 mg and chlorpromazine 25 mg injections were administered to the patient, and after providing sedation, she was admitted to the psychiatry service. No pathological finding was detected in blood tests, EEG and cranial MRI performed during clinical follow-ups. With the pre-diagnosis of substance-induced psychotic disorder, injection therapy was continued for 3 days, and then oral treatment was started with haloperidol 2\*5 mg, chlorpromazine 75 mg and biperiden 2 mg. We started the treatment of the patient with classical antipsychotics, but we crossed over to aripiprazole treatment in the outpatient clinic controls. She is currently on aripiprazole 5 mg treatment. The patient was discharged as treatment 10 days later. Informed consent was obtained from the patient and her relatives about the study.

**DISCUSSION:** LSD is a hallucinogen substance that can be used for self-medication, albeit rarely, especially in young and adult populations. In this case report, a rare case that we followed up with the diagnosis of psychotic disorder after LSD use was presented and discussed in the light of the literature.

**Keywords:** d-Lysergic Acid Diethylamide, psychotic disorder, substance use disorders

## APPROACH TO LATE-ONSET BIPOLAR DISORDERS IN THE AGING WORLD

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**OBJECTIVE:** Frontotemporal dementia(FTD) is a neuropsychiatric disease that accounts for 12.5-16.5% of degenerative dementias. Its incidence in all dementias is 3-10% and its onset is between 45-65 years of age. Behavioral subtype with personality, behavior and cognitive changes. Psychiatric-behavioral symptoms, especially without cognitive impairment, personality changes, deterioration in interpersonal relationships and affect are the main features of the behavioral subtype. In this case, the differential diagnosis of Late Onset Bipolar Disorder(LOBD) and FTD will be discussed.

**CASE:** Our patient is 62 years old, male, married, with 2 children, primary school graduate, and works as a sales consultant. He has no psychiatric diagnosis and treatment history. There is no family history of psychiatric illness. The patient had intolerance, decreased communication, unhappiness, and fatigue for the last 1 year. The patient, who left his job for the last 1 month, was admitted to our service due to complaints such as increased spending, increased energy and mobility, decreased sleep, leaving the house with underwear, throwing things out of the house. His mood and affect was irritable. Speech volume, speed, and tone had increased. He did not describe a perceptual disorder. His thought content included paranoid-persecutive and grandiose delusions. His attention was natural, his orientation was complete. His judgment was impaired, he had no insight into his illness. Diagnosis of bipolar disorder due to medical condition was excluded because the tests were within normal ranges. Injection treatment was discontinued during the patient's follow-up, and quetiapine 400 mg/d treatment was started. EEG, cranial MR and NPT examinations were requested from the patient. In cranial MR, the ventricular system is ectatic secondary to atrophy. In both periventricular areas, hyperintense gliotic foci, which are thought to be nonspecific, were observed in millimetric T2-Flair sequences. Minimal Test was applied(30/30). In the NPT, there was impulsivity, difficulty in maintaining attention, impaired reasoning. The patient was consulted with neurology in terms of differential diagnosis of FTD with cranial MR and NPT. In the PET imaging of the patient hypometabolism was observed in the posterior part of the two parietal lobes. Significant dilatation in the ventricular systems was noted. As a result of PET imaging, FTD was excluded. The patient by diagnosed LOBD manic episode, discharged from quetiapine 600 mg/d treatment.

**DISCUSSION:** We discuss that LOBD in middle and older age can simulate early bvFTD symptoms. LOBD was observed that 6–8% of all new cases develop in individuals 60 years or older. It is essential to distinguish between older Bipolar patients by age at onset because late onset patients show a less frequent family history of affective disorders and higher frequency of neurological co-morbidities. In fact, a greater prevalence of vascular risk factors and higher prevalence of silent cerebral infarctions has been reported in patients with late onset BD compared with patients with early onset of the disease. For these aforementioned reasons, clinicians should keep in mind detailed neurological examination in patients with LOBD.

Informed consent was taken.

**Keywords:** FTD, Late Onset Bipolar Disorder, PET

## SUSCEPTIBILITY TO EATING DISORDERS OF MEDICAL FACULTY STUDENTS AND ASSOCIATED FACTORS

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**BACKGROUND AND AIM:** Eating Disorders prevalence has been increasing in recent years, and there is a need to learn their psychosocial causes. The aim of our study is to investigate the eating attitudes and predispositions to eating disorders of medical school students who may have impaired physiological rhythms such as sleep and eating during the long and difficult medical education process, and also to investigate the possible sociodemographic and living conditions on their eating attitudes.

**METHODS:** Pamukkale University Faculty of Medicine students were included in the study on a voluntary basis. An online questionnaire was applied to the all participants. Sociodemographic Data Form which investigates the personal characteristics, habits and living conditions; Eating Attitudes Test which measures susceptibility to eating disorders was applied. Eating Attitude Test (EAT-40) is a 40-item self-report scale with a cut-off value of 30 points that developed to identify people with risk to eating disorders. The data were analyzed with the SPSS 22.0 package program. The participants were divided into two groups according to the total scores of the Eating Attitudes Scale, as those who are predisposition to eating disorders and those who are not. Approval was granted by the Clinical Research Ethics Committee (no:E-60116787-020-61232, dated:01/06/2021)

**RESULTS:** This study was included 279 medical faculty students. 67% (n=187) of the participants were female and 33% (n=92) were male. 12.5% (n=35) of participants were 1st class, 32.3% (n=90) of 2nd class, 19.7% (n=55) of 3rd class, 7.2% (n=20) of 4 th class, 11.1% (n=31) of 5th class, and 17.2% (n=48) of were 6th class students. The mean age of the participants was 21.5±2.5, and the mean Body Mass Index (BMI) was 22.38±3.76. 12.2% of the participants (n=34) had a score of 30 and above in EAT, indicating that they were at high risk for eating disorders. Of those with an EAT score of 30 and above, 85.3% (n=29) were female and 14.7% (n=5) were male. In all participants, 15.5% of women and 5.4% of men were found to be in the risk group for eating disorders. According to EAT scores, women were found to be significantly more susceptible to eating disorders than men (p=0.016). When the relationship between sociodemographic data and EAT is examined; no statistically significant difference was found in terms of sociodemographic data and living conditions such as age, BMI, living with family, living alone, living in a dormitory, history of immigration, divorcement or being together of the parents, consumption of junk-food or fast food, and history of psychiatric treatment (p>0.05).

**CONCLUSIONS:** The results of the current study, in which we aimed to determine the eating attitudes and their predisposition to eating disorders of medical school students, concluded that women were more predisposition to eating disorders than men, but sociodemographic characteristics and living conditions that we examined did not have a susceptibility effect on to eating disorders. For a better functionality within the scope of preventive mental health, there is a need to investigate different sociodemographic characteristics with a larger sample.

**Keywords:** Eating Attitudes, Eating Disorders, Medical Faculty Students

## MYORG GENE MUTATION RELATED PSYCHIATRIC COMORBIDITIES: A PEDIATRIC CASE REPORT

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**OBJECTIVE:** Primary familial brain calcification is a neurogenetic disease that can manifest itself with a wide variety of cognitive and psychiatric symptoms due to familial transmission, calcifications developing in cerebral vessels. Basically, 4 different genes have been identified: SLC20A2, XPR1 genes encoding phosphate transporters, PDGFB encoding platelet-derived growth factor, and autosomal dominant mutations in PDGFRB genes encoding the same growth factor binding receptor have been shown to be associated with PFBC. The age of onset of symptoms and clinical presentation vary considerably from patient to patient. Some cases remain asymptomatic for lifelong. The most common symptoms were classified as speech disorder, pyramidal symptoms, cerebellar symptoms, movement disorder, gait disorder, psychiatric symptoms, and cognitive impairment. Our case is going to be the first pediatric case with MYORG gene mutation. The neurological symptoms and radiological imaging findings of this case were discussed in another case report. In this case report, it is aimed to examine the psychiatric symptoms and comorbidities of the case.

**CASE:** Informed consent forms were obtained from the patient and her mother.

The patient was a 13-year-old girl who has applied to psychiatric department in another hospital at the age of 5.5 displaying grief process, anger control problems, attention problems, mobility and impulsivity after the death of her father. Attention Deficit Hyperactivity Disorder (ADHD) was considered as an initial diagnosis and methylphenidate treatment was started. Follow-up continued throughout the process. At the age of 9, the patient applied to department of pediatric endocrinology for precocious puberty. Pediatric neurology and pediatric genetic were consulted, after calcification in the lentiform nuclei, frontal and parietal lobes in the cerebellum was observed in the brain CT scan.

Thereafter; the patient was referred to our hospital. Upon completion of genetical assessment, a homozygous mutation in the MYORG gene was detected in 2020. For academic difficulties, perception problems, reading comprehension problems, forgetfulness, anger control problem, choking and freezing when angry, irritability, low frustration threshold, impulse control problems; the patient was referred to the Child and Adolescent Psychiatry outpatient clinic. The diagnosis of ADHD, Oppositional Defiant Disorder (ODD), and specific learning disability was considered after the follow-up in the case. WISC-R test scores were reported as total IQ 84, verbal IQ 73 and performance IQ 99. The case was referred to special education according to the test results. Aripiprazole was administered as 5mg daily. After administration of aripiprazole, behavior problems and anger control problems improved. We continued to conduct follow up psychiatric interviews.

**DISCUSSION:** When we come across multiple and resistant psychiatric complaints in pediatric age, it is very important to evaluate these children in the aspect of neurology and genetic. This case can be noteworthy, since it is the first case of MYORG gene mutation reported in the pediatric age. In literature, the case samples are scarce, and there is not enough data about the neurological findings observed in this syndrome as well as the accompanying psychiatric symptoms. Further research and multidisciplinary studies are needed in terms of neurogenetic diseases and psychiatric comorbidities.

**Keywords:** MYORG gene, mutation, pediatric, psychiatric comorbidities

## A CASE OF RECURRENT HYPONATREMIA IN PATIENT RECEIVED QUETIAPIN, VALPROIC ACID WITH BIPOLAR DISORDER

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**OBJECTIVE:** The syndrome of inappropriate secretion of antidiuretic hormone (SIADH) entails euvoletic, hypotonic hyponatremia, and serum hypoosmolality. Most of anti-epileptic drugs have also been accounted for this syndrome. However, it is difficult to know the role of the drug exactly, as even drug-free psychiatric patients who are with schizophrenia have mostly SIADH. The combination of medication, excessive fluid intake, and comorbidities that limit water excretion increase the risk. Since elderly patients are already using more than one drug, they should be closely observed after starting SSRI or antipsychotics. Herein, we present a case of a woman with schizoaffective disorder repeatedly developed hyponatremia due to the SIADH, recuperated after cessation of quetiapine.

**CASE:** A 66-year-old female patient admitted to the emergency department with complaints of amnesia, confusion, somnolence. She was admitted to the internal medicine inpatient service two times before because of hyponatremia. The patient's initial laboratory studies in the emergency room showed serum sodium of 121 mEq/L. Her medications included biperiden 4 mg/day, risperidone 6 mg/day, sodium valproate 1500 mg/day, quetiapine 400 mg/day. The serum sodium valproate level was 60 mg/L (trough level). Her treatment was arranged as follows: biperiden 4 mg/day, risperidone 3 mg/day, sodium valproate 1000 mg/day, chlorpromazine 100 mg/day. Quetiapine was stopped as well. During internalisation period her test revealed urea: 61—>63 mg/dL, creatinine: 1.8—>2.05—>2.27 mg/dL, Na: 121—>125—>132 mEq/L. During this time she had returned to her baseline mental state. Informed content was obtained.

**DISCUSSION:** With polypharmacy and older aged patients, drug-induced hyponatremia risk is likely to increase. Therefore, while prescribing and selecting medications, their pharmacokinetic properties, their propensity for drug-drug interactions, side effect profile and toxicities should be examined in detail.

**Keywords:** Bipolar Disorder, Hyponatremia, Quetiapin, Valproic Acid

## FRONTOTEMPORAL DEMENTIA: A MEDICAL PURGATORY BETWEEN NEUROLOGY AND PSYCHIATRY

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**OBJECTIVE:** Frontotemporal dementia (FTD) is a disease that usually begins insidiously at the age of 50-60 years and tend to exhibit personality changes, disorganized and disinhibited movements, loss of insight, perseverative behaviors, changes in eating habits, and delusions and hallucinations may accompany, although it is rarer than Alzheimer's type dementia. In this case report, a female frontotemporal dementia patient with personality, behavioral and mood changes is presented. Consent was obtained from the patient herself.

**CASE:** 71-year-old, university graduate, retired, divorced woman with 3 children, living alone in Mersin. The patient was brought to the emergency service by her relatives due to personality changes, impairment in behaviors, low self-care and paranoid delusions such as she would be harmed and followed.

It was learned from the relatives that the symptoms started 1 year ago with irritability and mild personality changes and the severity of symptoms increased with time. The patient showed aggression, up to physical violence towards people whom she had close relationships with, attempted marriage with inappropriate people, provided financial aid in large amounts, re-started smoking, and her sleeping and eating patterns were changed. Additionally, she had urinary and fecal incontinence. She was admitted to the psychiatry service for differential diagnosis and treatment plan.

No pathological finding was detected neither in her physical and neurological examination nor in routine blood tests. In the neuropsychological evaluation, the mini mental test score was found to be 27/30. Brain MRI and CT imaging were performed and bilateral temporal atrophy and signal changes were detected. Partial improvement in behavioral symptoms was achieved by treating the patient with risperidone 3 mg/day and olanzapine 5 mg/day.

**DISCUSSION:** The differential diagnosis between behavioral variant of frontotemporal dementia (bvFTD) and primary psychiatric disorders is challenging due to the abundance of common findings and the lack of accurate biomarkers.

In the case that has been presented, the symptoms started with personality changes and deterioration in social conduct, her memory and frontal functions were relatively preserved, delusions and hallucinations were also accompanied.

BvFTD is one of the diagnoses that should be considered, especially in schizophrenia-like cases in which disorganized behaviors and personality changes that begin after the fifties are prominent. It is a fact that this dementia presentation should be better recognized; better prognostic tools and solid diagnostic algorithms should be established; neuropsychological tests should become widespread in order for similar cases to not remain undiagnosed.

**Keywords:** Differential diagnosis, frontotemporal dementia, primary psychiatric disorders.

## AN OVERLOOKED DIAGNOSIS ENURESIS NOCTURNA IN ADULTS: A CASE REPORT

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**OBJECTIVE:** Involuntary bedwetting at night is defined as enuresis nocturna in children over 5 years of age without congenital or acquired central nervous system defect. According to the DSM-V criteria, recurrent involuntary urinary incontinence during sleep in children older than 5 years is the occurrence of this behavior at least twice a week for three months. In addition, this should not be due to a medical illness or direct effect of any substance (APA 2013). The prevalence is reported as 7% for boys and 3% for girls in children aged 5 years. However, studies have shown that nocturnal enuresis can actually affect 2-6% of adults as well. Genetic factors, arousal disorders, functional delay in central nervous system maturation and psychosocial factors are blamed in the etiology. In this case report, a case of ongoing adult nocturnal enuresis as a result of intermittent treatment failures during childhood and beyond is discussed. Consent was obtained from the patient.

**CASE:** The 29-year-old male patient, single, primary school graduate, lives with his family who was admitted to psychiatry clinic for the first time with the complaint of bedwetting 3-4 nights a week, which has been present since his childhood and not during the day. It is learned that he applied to the department of urology several times and had lots of test including urodynamics, MRI scan etc. but nothing found pathological. During this period, he used a number of drugs which he can not remember the names prescribed by urology, but complaints didn't regress at all. He has not been using medication for about 10 years, and he states that unhappiness, fatigue, low motivation and low energy have been added to his current enuresis complaint for the last 1 year. No additional known medical disease or substance use was described. DM, hypertension, OSAS was noted in family history. Neurology and sleep disorder departments' consultations were requested to rule out organic etiology. Past urology examinations were reviewed. No organic pathology was found. He was diagnosed with (non organic) enuresis nocturna and major depressive disorder. Imipramine 25 mg was started to gradually increase the dose. The patient's current depressive state and enuresis complaints regressed during follow-ups.

**DISCUSSION:** Enuresis Nocturna is a condition that disrupts a person's daily life both in childhood and adulthood. It can prevent career status, create problems in interpersonal relationships, and in some cases can be complicated by comorbidities. Today, it has been observed that there are not many studies on non-organic enuresis nocturna in adults, and a standard approach has not been determined in this regard. As in our case, delayed diagnosis increases the comorbidities and makes it difficult for patients to access treatment. All patients who presents with complaints of enuresis nocturna should be evaluated primarily with a detailed history and physical examination, complete blood and urine analysis, and MRI and urodynamic tests when necessary. Although psychiatry may not the first field that patients apply to, it should be kept in mind that multidisciplinary approach including psychiatry would be beneficial.

**Keywords:** adults, Enuresis Nocturna, Imipramine, urology

## SCHIZOPHRENIA, WHICH BEGINS WITH INTENSE OBSESSIVE-COMPULSIVE SYMPTOMS: A CASE REPORT

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**OBJECTIVE:** The frequency of obsessive-compulsive symptoms (OCS) and obsessive-compulsive disorder (OCD) is found to be considerably higher in patients with schizophrenia compared to the normal population. OCS are associated with an earlier age of onset in schizophrenia and are often noticed before the onset of psychosis. The term schizo-obsessive disorder may be associated with intense OCS in patients with schizophrenia. It is controversial whether this association is more than just a comorbidity and whether it represents a separate subgroup. It is not included in the DSM-5 diagnostic system.

**CASE:** A 25-year-old single, teacher, male patient was hospitalized with complaints of watching his reflection in mirrors and shiny objects for hours, negative thoughts about his appearance and age, agitation and aggression. His first complaints started at the age of 17, with contamination obsessions and cleaning compulsions, then he started to spend hours in front of the mirror, thinking that he looked older than his age. He was followed up with the diagnosis of OCD and various antidepressant and antipsychotic agents were used in the treatment. Although treatment compliance was good, full well-being was not achieved. In the clinical observation, the patient's self-examination in a strange posture by completely covering his face in front of the mirror, and the symptoms of sudden anxiety and relaxation at this time were evaluated as a psychotic content. Firstly amisulpride 800 mg/day, escitalopram 20 mg/day, lorazepam 3 mg/day were ordered. Although the time required for drug efficacy was completed, no improvement was observed. It was planned to start clozapine for the patient whose psychotic content did not regress with various second generation antipsychotic agents used so far. Clozapine dose gradually increased up to 400 mg/day. Clomipramine 150 mg/day treatment was started for the ongoing mirror obsession. Escitalopram treatment was discontinued. The Y-BOCS test applied at the beginning of the hospitalization decreased from 23 to 13 points, and the MOCI test decreased from 23 to 20 points after the treatment. The patient was diagnosed with schizophrenia and OCD, and followed for 6 months after discharge. With less negative thoughts about his age and appearance, he looks in the mirror only a few times a day. Informed consent was obtained from the patient.

**DISCUSSION:** As we mentioned in our case, it has been supported by previous studies that there is a group of patients who were first diagnosed with OCD and treated, and then diagnosed with schizophrenia. Although clozapine is a pharmacological agent that is effective on both positive and negative symptoms in schizophrenia, studies have observed that it has an increasing effect on OCS. In our case, clozapine treatment was decided after no regression of psychotic symptoms despite the use of different antipsychotic agents in the effective dose and time before. Also, treatment is strengthened with clomipramine, an antiobsessional agent. Considering the post-discharge follow-up, it was observed that the patients well-being continued with the current treatment for 6 months, and his functionality was good. Co-occurrence of OCD and schizophrenia is quite common, and further research is required to determine treatment principles.

**Keywords:** clozapine, obsession, obsessive-compulsive disorder, schizo-obsessive, schizophrenia

## A DIFFERENT APPROACH TO REFUSAL TO EAT

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**OBJECTIVE:** Refusal to eat and drink is quite common in patients with psychosis. It can have life-threatening outcomes, even death in some cases. When we encounter a patient who is not eating, electroconvulsive therapy is thought to be the first treatment option. Clozapine or other antipsychotic drugs may be an option. We obtained the patient's and his legal guardian's approval for case report.

**CASE:** A 31-year old male, who was under antipsychotic treatment, was brought to the psychiatric emergency room by his parents. He has been having trouble consuming solid food since July. As a result, he has lost more than 10 kilograms. He stated that he had auditory hallucinations, a voice telling him not to eat. He was taking the prescribed medication regularly since discharge. In this recent visit to the E.R., his mood was dysphoric, his affect was limited, he had auditory hallucinations commanding him not the eat, he described no delusions at all, impulse control decreased, he mentioned no suicidal thoughts.

The patient followed up with a diagnosis of schizophrenia for approximately 12 years and has a history of 2 hospitalizations. He had been admitted to the inpatient clinic and treated with a daily dosage of clozapine 400 mg, amisulpride 800 mg, 15 sessions of ECT in 2021, July.

The patient underwent endoscopy recently before admitting to the emergency department. He was consulted to the gastroenterology, with the recent endoscopy report and history, organic pathology was eliminated.

As our treatment plan was ECT, clozapine dosage was reduced to 300 mg slowly. During his hospitalization, he wasn't eating any solid food, only fruit juices, and formula. After the 10th session, his refusal to eat solid food has not changed. We decided to limit his formula and juice intake and revised his medication: clozapine 300 mg daily and zuclopenthixol long-acting injection 200 mg were administered. After just one day of prohibiting formula, the patient started eating small portions of solid food.

**DISCUSSION:** We observed that the patient's beliefs may change as a result of the change in the strategy applied in behavioral approaches, and this gives us hope for cognitive-behavioral approaches to schizophrenia. It should be considered that cognitive-behavioral therapy may be effective in the patient group where judgment and insight are reduced. Even minor changes in our approach to the patient can help create differences in the clinical picture. We should consider adding behavioral approaches to medical treatments, especially dealing with behavioral problems.

**Keywords:** schizophrenia, refusal to eat, behavioral changes, behavioral cognitive approach

## A CASE WITH INTERMETAMORPHOSIS AND FRÉGOLI SYNDROME

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**OBJECTIVE:** Delusional misidentification syndromes (DMS) are delusions in which the person believes that the people, places, objects, and events around him have changed or that the same has been reproduced. Intermetamorphosis syndrome is the delusion that the physical and mental identities of familiar or unfamiliar people change and turn into someone familiar to the patient. In Frégoli syndrome, different people are believed to be one individual in disguise. Here, we present a case of acute psychotic disorder with comorbidity of these two syndromes.

**CASE:** A 28-year-old female patient applied with complaints that a person whom she resembled to her ex-husband, followed and wanted to harm her for about 2 weeks. This person lived on the roof of her house and that she and her family members were poisoned by the body odor he emitted. She stated that she was poisoned and accordingly having her stomach washed, restlessness and insomnia. She was hospitalized with the diagnoses of acute psychotic disorder and DMS. She reported that the faces of the other patients resembled those of her ex-husband, that she heard her husband's voice on the roof of the clinic. Initial Positive and Negative Syndrome Scale (PANSS) score was 64. There was no abnormality other than low vitamin B12. She had no lifetime history of alcohol and substance use. Brain magnetic resonance imaging (MRI) and electroencephalography also showed no abnormalities. Haloperidol 5 mg/d, biperiden 2 mg/d, and olanzapine 2.5 mg/d were administered to the patient with a diagnosis of acute psychotic disorder according to DSM-5 criteria. After approximately 1 month of hospitalization, the patient's PANSS score decreased to 36. In the follow-up, it was observed that the patient's functionality increased and she did not have DMS with the same treatment.

**DISCUSSION:** In our case, we considered intermetamorphosis and Frégoli syndrome because of persecution and misidentification delusions. DMS is more common in women than men, and its frequency increases in neurodegenerative diseases. DMS has often been reported to be of organic origin. In our case, no neuropathology was detected in brain MRI. DMS may be related to the dysfunction of the belief evaluation system in the right frontal lobe. There are similar neuropsychological processes that lead to the maintenance of delusional belief in paranoid schizophrenia and DMS. The partial decrease in persecutory delusions and DMS after antipsychotic treatment in our case supports this view. Some dual-factor models have been proposed in which loss of emotional familiarity is associated with a secondary defect in one or more processes of the information processing chain. DMS symptoms were initially thought of as psychological defense mechanisms against repressed desires. Projection and splitting may play a role in DMS. A person who cannot integrate their repressed or "bad" aspects may project these characteristics onto another person. In our case, the misidentification was against her husband. Our patient was jealous of her husband before the illness. We may suggest that she has ambivalent feelings towards her husband.

**Keywords:** Delusional misidentification syndromes, Frégoli syndrome, Intermetamorphosis syndrome

## A RARE SIDE EFFECT OF ELECTROCONVULSIVE THERAPY: MANIC EPISODE

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**OBJECTIVE:** Electroconvulsive therapy (ECT) is a treatment that is carried out by stimulating the brain tissue with a brief-pulse electrical stimulus. It is the process of creating generalized convulsions and has been used in the treatment of some psychiatric diseases, especially depressive disorders. ECT is commonly used in patients who have failed to respond to one or more courses of antidepressants. However, bipolar disorder manic or mixed episodes, schizophrenia, and catatonia are the other diagnostic indications for ECT. Although it has an important place in the treatment, one of the rare but serious side effects of ECT is the development of a manic episode in the patient. It is generally known that manic episode is triggered by antidepressants. We aimed to report a case of ECT-induced mania and to discuss the possible underlying mechanism of this rare side effect of ECT.

**CASE:** We report a 59 years-old male patient who has a 20-year history of depressive episodes and has remitted since 2018. The patient had been admitted to another hospital with complaints of feeling sad and hopeless, insomnia, psychomotor retardation, decreased appetite, which started after an in-vehicle traffic accident four months ago. He had been considered with an early diagnosis as catatonia or retarded depression and had been hospitalized. The treatment had been initiated with citalopram 20 mg/d and had been potentiated to 40 mg/d at that treatment center. Lorazepam had been also added to the treatment due to his catatonic symptoms. Since the patient did not respond to this treatment, citalopram treatment had been switched with venlafaxine and potentiated to 225 mg/d. Mirtazapine 30 mg/day had been added to the venlafaxine to enhancing the effectiveness of treatment. The patient had been treated with this regimen for approximately three months. However, he had not shown adequate clinical improvement and he was referred to our clinic with the aim of administration of ECT. We continued the patient's current venlafaxine and mirtazapine treatment and added risperidone 1 mg/d which he responded to the previous depressive episodes. As we completed the patient's preparations for ECT, we gradually reduced the lorazepam dose. We started ECT sessions in addition to the current drug treatment and observed the clinical improvement in psychomotor retardation, depressive mood, sleep, and appetite. However, his psychomotor activity and speech output were increased. His affect became angry while mood became irritable after receiving four sessions of ECT. We evaluated him as ECT-induced mania, stopped the ECT, and decreased the dosage of antidepressant treatment. His treatment continues still in our inpatient clinic.

**Note:** Consent was obtained from the patient and his relatives.

**DISCUSSION:** Many explanatory theories that are currently used to explain the mechanism of ECT. Neurotransmitter theory, anticonvulsant theory, and neuroendocrine theory are the most accepted ones. Although we still do not know the exact mechanism of ECT, the alteration in the brain homeostasis may lead to a new clinical presentation in the patients. It has been suggested limbic stimulation by ECT could exceed the affective target and result in mania. Clinicians should be aware of the possibility of mania induction with ECT.

**Keywords:** Catatonia, Depression, Electroconvulsive therapy, Manic episode

## PSYCHOSIS AND SUICIDE RISK IN A PATIENT DIAGNOSED WITH HUNTINGTON'S DISEASE

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**OBJECTIVE:** Huntington's disease(HD) is an inherited, autosomal dominant, neurodegenerative disease including motor, cognitive, and neuropsychiatric features. The disease is caused by an expanded CAG trinucleotide repeat in the gene that encodes the protein huntington. HD is typically diagnosed on the basis of clinical evaluation, family history, and genetic testing. There is a wide variety of behavioral and psychiatric symptoms that may be seen in HD, such as aggression, irritability, impulsiveness, depression, anxiety, mania and psychosis. The prevalence of psychotic symptoms in HD patients is variable, ranging from 3 to 11%. Besides, suicide rates are over four times higher than in the general population. We aimed to present a patient diagnosed with HD who had two consecutive hospitalization in our inpatient clinic due to psychotic symptoms and suicide risk.

**CASE:** Our case was a 38-year-old male, had been diagnosed with HD through a family history of involuntary movements and genetic testing four years ago. The patient's first psychiatric admission was in the fourth year after being diagnosed with HD to our emergency room(ER). His family brought him to the ER with the current complaints including homicidal behavior. We hospitalized the patient to diagnose and treat. In his psychiatric examination, his affect was restricted while mood was dysphoric. Reference and persecutory delusions were determined in the content of thought. He also described auditory hallucinations. The patient was diagnosed with organic psychosis secondary to HD. We initiated the treatment with olanzapine 5 mg/d and potentiated to 20 mg/d. The patient did not respond to the olanzapine treatment and his positive psychotic symptoms continued. We decided to switch treatment to clozapine. However, his liver functioning tests increased with the clozapine use. Therefore, clozapine treatment was stopped. Paliperidone 3 mg/day was started and potentiated to 6 mg/d due to its excretion through the kidney. His delusions and hallucinations tailed off and he was discharged. His second admission to psychiatry was 2 months after his discharge. It is determined that he has never used his treatment. His current complaints were anhedonia and suicidal ideas. He was hospitalized again and diagnosed with depression secondary to HD. His treatment was started with escitalopram 5 mg/d and potentiated 10 mg/d. Olanzapine was also added to the treatment for the effectiveness in depressive symptoms and with the aim of protection from psychotic symptoms. His clinical symptoms were improved with the treatment and he was discharged. Informed consent was obtained.

**DISCUSSION:** HD is characterized by selective atrophy of medium spiny neurons in the caudate and putamen Besides, loss of large neurons in the deep layers of the frontal and parietal cortex is typical. The exact mechanism of alterations related to gene mutation is not entirely known. Loss of inhibitory GABAergic function and increased dopamine turnover due to selective survival of type II spiny interneurons has been proposed as an explanation for the emergence of psychotic symptoms in HD. Consequently, psychiatrists should be aware of the possibility of different clinical features in patients diagnosed with HD.

**Keywords:** Huntington Disease, Paliperidone, Psychosis

## FIRST PSYCHOTIC ATTACK RELATED TO SARS-COV-2: A CASE REPORT

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**OBJECTIVE:** SARS-COV-2 is considered to be a potential neurotrophic virus and many COVID-19-related neuropsychiatric cases such as mania, psychosis and delirium have been reported during the pandemic. In this case report, first psychotic attack of a 46 year old male patient who was brought to our psychiatric hospital after COVID-19 will be presented.

**CASE:** Mr. F.G. a 46-year old male patient, married, with no previous psychiatric history and none use of psychotropic drugs, was brought to the psychiatric hospital with such complaints as anger, physical violence, visual hallucinations, fear of being hurt and thinking that he was set up by his family. According to the anamnesis taken from his family, the patient went to the hospital 1 month ago with such complaints as high fever, cough, lassitude. He tested positive for COVID-19 and was hospitalized in the COVID service for 10 days. After he was discharged from the service, he again went to hospital with other complaints such as weakness and abnormal weight loss. As a result of blood tests, It was learned that the patient's blood glucose was not regulated. He was diagnosed with type 2 diabetes and hospitalized in the intensive care unit for 1 week. After 1-week treatment, he was referred to internal medicine service. Because of observations at internal medicine clinic like disorganized talking, skepticism, visual hallucination, physical violence out of delusion of persecution and reference, treatment refusal he was referred to psychiatry clinic and hospitalized with pre-diagnosis of COVID-related psychosis. Detailed biochemical (liver, kidney, thyroid function tests, electrolytes) and hemogram tests performed on the patient were normal except for CRP (C-reactive protein) and procalcitonin. For further investigation, cranial tomography (CT), cranial magnetic resonance imaging (MRI) were taken. CT and MRI examinations of the patient were evaluated within normal limits and neurological pathology was not considered. PANSS (Positive and Negative Syndrome Scale) rating applied to the patient was evaluated as moderate disease with score of 89. As treatment, haloperidol 10 mg/day and biperiden 5 mg/day IM were medicated in the first stage. The drug dose was gradually reduced due to the rapid regression of psychotic symptoms in the clinical course. Dose of haloperidol was reduced to 2 mg/day as PANSS score regressed to 34. It was learned that all symptoms of the patient regressed and he returned to his former functionality in the first month after discharge.

**DISCUSSION:** The SARS-COV-2 virus is thought to trigger some mechanisms that may cause neuropsychiatric complications. The main of these complications are, infection with the virus and the cytokine storm it causes creates a cytotoxic effect on the corpus callosum; increased cytokines in the central nervous system increase the neuroinvasive potential of the virus by increasing ACE-2(Angiotensin-converting enzyme 2) receptor expression in glia and neurons; transmission of the virus from the olfactory nerve to the central nervous system by retrograde axonal transport; use of exogenous corticosteroids; peripheral cytokines leaking through the blood brain barrier and creating neurotoxic effects.

**Note:** Consent was obtained from the patient's relatives.

**Keywords:** Covid-19, Neurotrophic, Psychosis, SARS-COV-2, Schizophrenia, Virus

## MUSICAL HALLUCINATION IN A PATIENT WITH HEARING LOSS: A CASE REPORT

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**OBJECTIVE:** Musical hallucinations are a rare phenomenon that is usually heard as a melody or tune but has not yet been fully explained in the field of psychiatry. Musical hallucinations may consist of instrumental and orchestral sounds and may reflect traces of the person's past life. It is commonly seen in psychotic diseases, organic psychosis, and especially in elderly and female patients with hearing loss. Although not fully known, its prevalence in elderly patients with hearing loss is estimated to be up to 2.5%. We present a case with musical hallucinations and other psychotic symptoms accompanying bilateral hearing loss and aim to discuss the possible underlying mechanism in this rare clinical phenomenon.

**CASE:** Mr. A.D. a 72-year-old male patient with no previous psychiatric history was brought to the psychiatric hospital with complaints including headache, humming, and hearing radio noise. According to the medical history taken from his family, it was learned that the patient had such conditions as skepticism, disorganized behaviors, refusal to eat and drink, aggression, hearing radio sound constantly, and persecutory delusions. The results of detailed biochemical (liver, kidney, thyroid function tests, electrolytes) and hemogram tests performed on the patient were normal. Cranial computed tomography and contrast-enhanced brain magnetic resonance imaging examinations were performed on the patient in order to investigate Alzheimer's Disease. Mild atrophy in cerebral convexity sulci and gyri which is compatible with his age was determined. The patient who was referred to the audiometry unit for a hearing evaluation was evaluated awake by applying the 40 HZ ASSR test since he could not perform behavioral audiometry. Audiometric test results revealed bilateral severe hearing loss. Since the patient had musical hallucinations, electroencephalography(EEG) was performed to exclude a possible epileptic seizure. No epileptiform anomaly was observed in EEG. He was rated for positive and negative symptoms severity using the PANSS (Positive and Negative Syndrome Scale). Positive symptoms subscale (P) score was 31, negative symptoms subscale (N) score was 15 while general psychopathology subscale score (G) was 36 (total: 82). We diagnosed him with psychotic disorder not otherwise specified with comorbid hearing loss. His treatment was started with quetiapine 25 mg/day, aripiprazole 2 mg/day, haloperidol 1.5 mg/day. The dose of aripiprazole was gradually increased to 15 mg/day. Following the one month of antipsychotic medication, his P, N, and G subscales scores of PANSS remitted to 13, 9 and 21 respectively (total: 43). However, the patient's auditory hallucinations persisted. We planned to provide a hearing aid with aim of clinical improvement but the patient refused to use a hearing aid. Nonetheless, he had an insight into his disorder and the necessity of treatment.

**DISCUSSION:** Musical hallucinations often have an underlying organic pathology. This case shows some similarities with other cases in the literature, especially in elderly and hearing-impaired patients. However, unlike the cases presented by Miller and Crosby in 1979, it was observed that in this case, the patient could not consciously and voluntarily change the pace, tone, or volume of the musical hallucination he heard. Moreover, this case differs from other cases due to the absence of any underlying neurological etiology (brain tumor ,epileptic focus, etc.) other than bilateral hearing loss.

**Note:** Consent was obtained from the patient's relatives.

**Keywords:** Auditory, Hallucination, Musical, Psychosis, Schizophrenia

## EXAMINING THE RELATIONSHIP BETWEEN COGNITIVE FLEXIBILITY AND MENTAL DIFFICULTIES IN ADOLESCENTS: A PRELIMINARY STUDY

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**BACKGROUND AND AIM:** Cognitive flexibility is a concept reflecting the ability to adapt and effectively change thoughts and actions according to the demands of the situation. It has been stated that cognitive flexibility describes the changes that occur in precise responses rather than complex ones and represents the adaptation ability of individuals. Through the cognitive flexibility, people adapt to new and unexpected environmental changes. For this reason, cognitive flexibility is thought to be a resilience factor in terms of mental strain. In our study, it was aimed to investigate the effect of cognitive flexibility on different mental difficulties among adolescents.

**METHODS:** The study was approved by the "Ankara University Faculty of Medicine Non-Invasive Clinical Research Ethics Committee"(Decision No:İ01-08-22). The study included 33 adolescent patients aged 12-18 (median: 14 ± 1.2) including 21 girls (%63) and 12 boys (%37). They applied to the Department of Child and Adolescent Psychiatry due to various reasons. Strengths and Difficulties Questionnaire (SDQ)-adolescent form and Cognitive Flexibility Scale were fulfilled by the participants and SDQ-parent form was applied to the parents. Cognitive Flexibility Scale scores and the subscales (behavior problems, attention deficit and hyperactivity, emotional problems, peer problems and social behaviors) of SDQ were assessed and correlated. K-sads-pl was used to make detailed psychiatric evaluations of all participants.

**RESULTS:** According to Pearson correlation; the Cognitive Flexibility Scale total scores and the behavioral problems subscale of SDQ-adolescent form were negatively correlated ( $r = -.374, p < .001$ ). And the total score of the Cognitive Flexibility Scale and attention deficit and hyperactivity subscale were negatively correlated ( $r = -.437, p < .001$ ). The relationship between the total score of the Cognitive Flexibility Scale and the score of SDQ emotional problems subscale were statistically significant at a high level ( $r = -.720, p < .001$ ) in the negative direction. The correlation between the total score of the Cognitive Flexibility Scale and the score of social behaviors subscale, which determines the socially positive and strong aspects of the participant, were highly significant in the positive direction ( $r = .585, p < .001$ ). The relationship between the Cognitive Flexibility Scale total score and the SDQ total score were highly significant in the negative direction ( $r = -.595, p < .001$ ). In addition, the group with the lowest mean score of cognitive flexibility (41.8) is eating disorder, while the highest group (48.75) is anxiety disorder.

**CONCLUSIONS:** When SDQ subscores and cognitive flexibility scores were compared; It was observed that participants with low cognitive flexibility scores had the highest SDQ emotional problems subscale scores, followed by inattention and hyperactivity, and behavioral problems subscale scores, respectively.

In addition, it was observed that the cognitive flexibility scores of the participants having high scores of SDQ social behaviors subscale, which predicts the socially compatible aspects of the adolescent, were also higher.

It was observed that patients with higher SDQ total scores also had lower cognitive flexibility scores.

Our study shows that cognitive flexibility may be an important predictor and protective factor in terms of mental difficulties in adolescent age group. These results emphasize that some areas of mental difficulties are more affected by cognitive flexibility and the importance of considering these areas in terms of cognitive flexibility in intervention processes.

**Keywords:** strengths and difficulties, cognitive flexibility, adolescent

PB-059

## A RARE CAUSE OF TREATMENT-RESISTANT DEPRESSION: UNDIAGNOSED LUNG CANCER

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**AIM:** Depression is a disorder that presents with depressed mood lasting for at least 2 weeks, loss of interest and energy, rapid changes in body weight, changes in sleep habits, weakness, thoughts of worthlessness or guilt, inability to concentrate or maintain attention, indecision, and recurrent thoughts of death. Treatment-resistant depression is defined as the persistence of depressive symptoms despite the use of at least 2 different antidepressant drugs for a sufficient time and in appropriate doses. In this case report, the diagnosis of lung malignancy in a patient with treatment-resistant depression was presented, with informed consent of the patient.

**CASE:** A 54-year-old female patient, who is primary school graduate, unable to work for 2 years, married and has 2 children, was admitted to the emergency department with complaints of unhappiness, malaise, inability to work, sleepiness and thoughts of death. The patient was hospitalized in the psychiatry clinic with an initial diagnosis of depressive episode. She was diagnosed with depression nearly 30 years before, and had a total of 3 hospitalizations in two different clinics, the last was in 2017. She and her relatives stated that she was discharged with complete remission. She was taking lamotrigine 200 mg/day, hyoscine-n-butylbromide + medazepam hcl tb 2x1, venlafaxine xr 225 mg/day as treatment, and told that her complaints have increased despite using medications regularly. The patient was diagnosed with treatment-resistant depression. The initial mental status examination of the patient was unremarkable except for depressed mood and depressive affect. In order to exclude a psychiatric disorder due to general medical condition, laboratory parameters were sent. Beta-hcg and CRP levels were elevated, and hepatitis-B surface antigen (HbsAg) was positive (+). Chest X-ray was done after the patient described stabbing pain in the right scapular area while breathing. A lesion was observed in the right upper apical area on the chest X-ray, then the patient was consulted to Internal Medicine and Thorax CT was planned. The CT showed that the lesion was compatible with primary lung malignancy and there was multiple mediastinal lymph nodes. Lung cancer was thought to be the reason of treatment-resistant depression and the patient was discharged with referral to appropriate clinics for follow-up and treatment. The psychiatric follow-up of the patient is continued in the outpatient clinic of our hospital.

**DISCUSSION:** In some cases, the treatment of depression can be difficult and treatment-resistant depression may develop. There are various reasons for resistancy to antidepressant treatment; such as incorrect diagnosis, anemia, inappropriate treatment, subclinical/clinical hypothyroidism, gastrointestinal malabsorption, coexistence of depression and dementia, autoimmune diseases, and the presence of other psychiatric conditions at the same time. As in our case, malignancies are among the rare causes. In cases with treatment-resistant depression, it should be considered that the underlying cause may also be malignancy.

**Keywords:** depression, lung cancer, treatment-resistant depression

## SMARTWATCH ANXIETY: DUE TO A CASE WHOSE ANXIETY WAS TRIGGERED BY USING A WEARABLE ELECTRONIC DEVICE

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**OBJECTIVE:** With the technological developments, new medical devices that are simple to use, have been made available to non-clinical settings and non-medical professionals. Among these devices that can measure many physiological parameters in real-time, there are wearable devices such as smartwatches. Smartwatches can measure many health parameters such as heart rate (HR), systolic blood pressure (SBP), diastolic blood pressure (DBP), and oxygen saturation (SpO<sub>2</sub>). While studies investigating the accuracy and precision of these devices are still ongoing, and even controversial results were obtained, these devices have already spread widely in the consumer market and their use is becoming more and more common. During the novel coronavirus disease 2019 (COVID-19) pandemic, the use of wearable health devices has become increasingly apparent.

**CASE:** Herein, a case of a 33-year-old female patient who started using a smartwatch during the COVID-19 pandemic is presented. She started to follow her health data such as heart rate and oxygen saturation on her smartwatch, and when she thought that her heart rate was high (which was actually within the normal range), she experienced anxiety which even turned into anxiety attacks over time. No heart disease was detected as a result of the examination and tests performed on the patient who was admitted to cardiology with the complaint of palpitation. Despite this fact, she continued to follow her heart rate data constantly, preoccupied with it, and when she noticed an increase, she got worried that she might have heart disease such as a heart attack. There was no history of chronic physical illness or medical treatment. The patient had a history of anxiety disorder in the past which ended with complete recovery with the use of Paroxetine 20 mg/day. In the follow-up, even though heart rate variability was controlled with Propranolol 40 mg/day recommended by cardiology department, smartwatch-induced anxiety resolved when she stopped using the smartwatch completely. Informed consent was obtained from the patient, who gave permission for the authors to collect and publish their data.

**DISCUSSION:** Many advantages of using a smartwatch, such as enabling monitoring daily activity and sleep, facilitating communication with family members and with healthcare professionals, have been reported. Although there are patients who benefit from the health data obtained from it, constantly monitoring them, trying to control them, and misinterpreting them, may provoke anxiety, especially in sensitive patients. Cognitive-behavioral interventions and discontinuation of smartwatch use can be considered as options in these patients. Also, we would like to emphasize the necessity of studies examining the relationship between health anxiety and technological inventions.

**Keywords:** Anxiety disorders, Health anxiety, Pandemic, Smartwatch

## DIAGNOSIS OF ORGANIC MOOD DISORDER AFTER EXTRA-TEMPORAL EPILEPSY SURGERY: A CASE REPORT

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**OBJECTIVE:** It is known that psychiatric diseases are more common in epilepsy patients than in general population. Increased comorbidity of epilepsy with psychopathology is explained by neurobiological, psychosocial factors, and conditions associated with treatment of epilepsy. Both medications and surgery made on temporal area may cause mood changes, but affective change after extra-temporal surgery has few evidence. We aimed to present a rare organic mood disorder case developed after extra-temporal epilepsy surgery.

**CASE:** A 19-year-old male patient was brought to the psychiatry outpatient clinic by his relatives due to self-talking behavior, insomnia, agitation, increased speaking, and aggressive behavior. According to the information received from his relatives, the patient's complaints started 2 months after the epilepsy surgery performed in February 2020, and continued for about 2 years, but increased in the last few weeks. His mood was dysphoric, his affect was irritable, his psychomotor activity, amount of his talking was increased, his associations were loosened, referential delusions and visual hallucinations were present. The patient with disinhibited behaviors also had decreased amount of sleep and appetite. The patient had epileptic seizures characterized by immobility and a deviation of the head to the right. that have been continuing since the age of 5, occurring 3-4 times a day, lasting for about 30 seconds. For the patient who had micropsia in the interictal period and did not describe aura, epilepsy surgery was planned due to increased frequency of seizures under treatment with topiramate 200mg/day, carbamazepine 800mg/day, and levetiracetam 2000mg/day in recent years. It was determined that the seizures were of right parieto-occipital origin and focal onset impaired awareness seizure was detected. After the surgery, for two years, the patient had only two epileptic seizures. The patient, who had no previous psychiatric follow-up, had a family history of psychosis in his uncle. The patient has no history of alcohol/substance use, and has no chronic disease other than epilepsy. In diagnostic evaluation, autoimmune encephalitis panel tests were negative, there was no problem in biochemistry and microbiological work-up. After excluding the other probable reasons, we diagnosed the patient as organic mood disorder. Antipsychotic treatment with risperidone 6mg/day was administered gradually. Patient's sleep, appetite, and psychomotor activity symptoms improved during the follow-up. On last visit his medications were arranged as Carbamazepine 800mg/day, topiramate 200mg/day, levetiracetam 1500mg/day, risperidone 6mg/day, bornaprin 8mg/day. An informed consent was obtained from the patient.

**DISCUSSION:** After epilepsy surgery neuropsychiatric symptoms may be seen, but mood disorder has been associated with especially temporal lobe epilepsy and surgery. There are few studies representing mood disturbance in patients undergoing resection of brain areas other than temporal lobe. It is also known that antiepileptic drugs, especially levetiracetam, may increase neurobehavioral symptoms, and may cause mood disorders. However, in this case affective change history was not present during the use of levetiracetam before surgery, and the onset of symptoms was after the surgery, so most probable diagnosis was organic mood disorder. In this presentation we aimed to discuss a case of organic mood disorder developed after epilepsy surgery.

**Keywords:** epilepsy, epilepsy surgery, organic mood disorder, mood disorder

## FAHR'S SYNDROME, PRESENTED BY PSYCHOSIS AND OBSESSIVE-COMPULSIVE DISORDER

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**OBJECTIVE:** Fahr's Disease is a rare neuropsychiatric disorder, characterised by intracranial bilateral calcium deposits. Calcium deposits can be seen in putamen, caudate nucleus, dentate nucleus, thalamus and cerebellum, but especially in the globus pallidus. Movement disorders such as parkinsonism, chorea, tremor, dystonia, athetosis and orofacial dyskinesia can be seen 55% of cases, and prevalence of psychiatric symptoms are 40%. Although mood disorders are the most common psychiatric symptoms; cognitive deficits, dementia, compulsions, paranoia, hallucinations, substance use and personality changes may occur in the course of disease.

**CASE:** Early psychiatric symptoms of 60-year-old female patient started nearly 1.5 years ago as visual hallucinations, seeing black shadows, auditory hallucinations, hearing the voice of her deceased husband, persecution and reference delusions, disorganized behaviors such as speaking herself, putting all the garbage in the cabinets. Symptoms such as social isolation, avolition, deterioration of personal hygiene, confusion and irritability were also occurred. Thereupon, the case applied to Gaziantep University Hospital in September 2021. She was treated in the psychiatry clinic for 10 days. In the brain CT imaging calcification was observed in the bilateral basal ganglia. Her father also suffered dementia at the age of 70 and diagnosed Fahr's Disease.

She was diagnosed with Fahr's Disease and organic psychosis. Her serum Ca and PTH levels were in normal range. quetiapine 400 mg/day treatment had given. Her sleep had improved, irritability, hostility and persecution thoughts had regressed.

In January 2022, due to contamination OCD, counting to a hundred before doing something, erotomanic delusions and auditory hallucinations, irritability and sleep disorder, which had been present for a few months, she applied to the psychiatry outpatient clinic of the Dokuz Eylül University Hospital. Escitalopram 5 mg/day was added to the patient's routine quetiapine 400 mg/day treatment. Since her obsessions and compulsions did not regress with escitalopram 5 mg/day treatment during a month, escitalopram treatment was stopped and she was admitted to Dokuz Eylül University Hospital psychiatry clinic with the diagnosis of Fahr's disease, organic psychosis and obsessive-compulsive disorder. Serum calcium, PTH and calcitonin level were normal. Neurological examination was normal. Neuroimaging was not requested again, because neuroimage screen had already been available in the last 6 months. Neurocognitive tests were performed and the case didn't consider as dementia. Pharmacological treatment was changed sertraline 50 mg/day, aripiprazole 10 mg/day and quetiapine 400 mg/day. With the current treatment, the obsessions, compulsions and ritualistic behaviors of the patient regressed, but the auditory hallucinations and erotomanic delusions continued, so the quetiapine dose of the patient was increased to 600 mg/day and partial improvement was achieved with the dose increase. During hospitalization, her obsessions, compulsions and irritability regressed, sleep pattern returned back to normal; partial improvement was observed in auditory hallucinations and erotomanic delusions.

**DISCUSSION:** Fahr's Disease can present with various neuropsychiatric symptoms. After secondary causes had been eliminated, neuroimaging methods could help for diagnose. This case report emphasizes the importance of neuroimaging especially in late-onset psychosis and OCD cases. Although Fahr's disease a rare disease, it should be considered in late-onset psychosis and OCD. Informed consent was obtained from the patient.

**Keywords:** Fahr's disease, obsessive-compulsive disorder, psychosis

## CARBAMAZEPINE-INDUCED ECZEMA, A CASE REPORT

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**OBJECTIVE:** Eczematous drug eruptions are a heterogeneous group of skin reactions that resemble eczema clinically and histologically. In addition, various drugs can cause eczema rashes. Here, the carbamazepine-induced eczema complaint of a young male patient who had no previous history of eczema was reported.

**CASE:** A 38-year-old married male patient applied to our clinic with a complaint of pathological gambling for the last six months. The patient or family had no history of movement disorder, substance abuse, or psychiatric illness. Routine biochemistry, hemogram, and thyroid function tests were regular. Carbamazepine 200 mg/day (100 mg in the morning and evening) was started on the patient with the diagnosis of pathological gambling. After one week, complaints of redness, itching, and blistering started on the skin. In the dermatology consultation, rashes were diagnosed as dyshidrotic eczema and could be triggered by medication use. Carbamazepine treatment was discontinued. The patient's clinical condition improved, and the dyshidrotic eczema complaint was resolved. It was thought that the patient suffered from dyshidrotic eczema due to carbamazepine use. Written informed consent was obtained from the patient for the case report.

**DISCUSSION:** It aims to raise clinicians' awareness about eczema complaints, which is thought to be a side effect of carbamazepine.

**Keywords:** carbamazepine, eczema, side effects

## TREATMENT RESISTANCE IN BIPOLAR DISORDER OCD COMORBIDITY: A CASE STUDY

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**OBJECTIVE:** In this presentation, we will discuss a case with a remission in mood symptoms and treatment resistance in sexual obsessions, somatic symptoms, control compulsions and reduced functionality. Verbal consent was acquired from the patient.

**CASE:** Patient is a 35 year old married man, who has a university degree and works as a public servant. He experienced symptoms first when he was in the military. He was admitted to the hospital with complaints of fever in the head and flights of ideas. Complete remission could not be achieved due to drug side effects and non compliance.

The patient was consulted when he was not under any drug therapy. During this consultation, he has following complaints: anxiety of choking while drinking water, headache while watching TV, waking up with palpitation while asleep, flights of ideas. He was diagnosed with Bipolar disorder, hypomanic episode and he was prescribed lithium carbonate 400mg/day, lorazepam 2mg/day, amisulpride 200mg/day. As he was not responding to medication positively and his symptoms were continuing he was admitted to the hospital.

As he was admitted, with a diagnosis of Bipolar Disorder and Obsessive Compulsive Disorder, he was prescribed lithium carbonate 600mg/day, clonazepam 3mg/day, quetiapine 50mg/day. Since his somatic symptoms and control compulsions continued fluvoxamin 100mg/day, haloperidole drops 6 drop/day were added to the treatment.

While the patient was followed up in the hospital, he complained about burning feeling in his hands, tingling scalp, sexual obsessions he did not mention before and banging his head against the wall to get rid of these sexual obsessions. He mentioned that, he could not talk to anyone or look people directly in their eyes due to his sexual obsessions. Following partial decrease in his complaints related to his obsessions and depression patient was discharged.

Medications were arranged in the outpatient follow-up of the patient. Clomipramine was added to his medication. For 4 month usage of risperidone 3mg/day, fluvoxamine 300mg/day, quetiapine 200mg/day, clomipramine 225mg /day, depressive symptoms was over but somatic symptoms and sexual obsessions still continued.

**DISCUSSION:** Forty percent of the OCD (Obsessive Compulsive Disorder) patients are non responsive to monotherapies with serotonergic agents. It is argued that, when the other mental disorders accompany OCD and are not treated adequately, OCD symptoms do not respond to treatment either. It is known that, existence of overvalued ideas in OCD attributed to the treatment resistance.

Low dose risperidone (up to 3mg/day) or aripiprazole (up to 15mg/day) is added to treatment when monotherapy isn't sufficient.

It is suggested that, there are 3 types of mental disorders that accompany OCD: i) major depressive disorder (MDB); ii) tics; iii) OCD with panic attacks and affective syndroms. Bipolar disorder with OCD comorbidity is typically seen in women at young ages and has low level of insight. Although our patient has mood disorder comorbidity, he is a man, contrary to the literature.

Management of 40-60% of patients who are resistant to treatment is challenging. Existence of another mental disorder, overvalued ideas, low insight and existence of sexual obsessions is correlated with resistance to the treatment.

**Keywords:** Bipolar, comorbidity, obsession

## MUNCHAUSEN SYNDROME IN A PATIENT WITH BORDERLINE INTELLECTUAL DISABILITY: A CASE REPORT

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**OBJECTIVE:** Munchausen syndrome (MS) was firstly used to describe people who tell their personal stories exaggeratedly, often give symptoms deliberately and apply to hospital in 1951 by Asher. A 29-year-old female patient diagnosed with MS in addition to borderline intellectual disability (ID) will be presented.

**CASE:** The patient is a woman, 29 aged, sick, married, has 2 children, graduated from secondary school and her success was low. The patient who has admissions to hematologic service due to the highness of INR for nearly 2 years, consulted us with the suspect usage of external medicine. In the interview, she stated that she was diagnosed with the lack of 10 factor, but she didn't bring the documents because the examinations were done in somewhere else, she used medicines due to infection and didn't use any additional medication, and her bleeding complaint had been in the last 2 years. It was procured from her previous medical records that psychiatry applications started after suspected cancer about 5 years ago, she received admittance treatment due to depressive symptoms and self-harming interventions such as wrist cuts, before discharging, her complaints increased, and she hadn't been applied and treated for the last 2 years. Mental state examination her self-care was enough. There was no sign of active delusion and hallucinations. She could talk about bleeding disease in detail but her other answers were short. Abstract thinking was reduced, IQ was 78. A diagnosis of borderline ID was made according to the DSM-5. INR elevation started after short-term use of warfarin in the second pregnancy. It was thought that medicine usage may be due to the fact that the INR decreased from 6 to 4 with treatment during the hematologic hospitalizations but increased again in the follow-ups and the external records weren't brought to us. It was talked with the family and found that her grandmother has rivaroxaban medicals and might had it from the chemist with medicine report. The pharmacy was contacted through the family and was told not to give it. Although approximately 6 months passed after this process, the patient did not apply with a high INR. In addition to ID, the patient was diagnosed with MS as a result of follow-up. Consent was obtained from the patient.

**DISCUSSION:** MS is the most severe way of factitious disorder, seen rarely. Our patient was diagnosed with MS because of the presence of clinically incompatible psychiatric complaints that started after suspected cancer, the increase in INR after short-term warfarin treatment, its persistence, the incompatibility of the INR with the treatment, and the patient's intention to search treatment. Self-harming is seen with the patients who have intellectual deficiency, but it was observed that the medicine in our patient was not for self-harming, on the contrary, it was for the purpose of seeking treatment. It was thought that the risky and long-term of the method he chose for treatment was due to his inability to evaluate possible outcomes due to his intellectual disability. In the literature, no case was found in which MS and intellectual disability coexist, so it is the first case.

**Keywords:** Munchausen Syndrome, Intellectual Disability, factitious disorder

## COMBINATION OF TWO MOOD STABILIZERS IN A SCHIZOAFFECTIVE DISORDER PATIENT PRESENTING WITH MANIC EPISODE

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**OBJECTIVE:** Schizoaffective disorder is a disease with persistent psychotic symptoms, such as hallucinations or delusions, occurs together with mood disorder such as depression, manic, or mixed episodes. Schizoaffective disorder and bipolar disorder are psychiatric disorders that both share common features and show significant differences. In this article, the case of a 29-year-old female patient with manic-type schizoaffective disorder is described. In the treatment of the patient, her becoming euthymic with the addition of a second mood stabilizer to the combination of mood stabilizers and antipsychotics was discussed. Consent was obtained from the relevant case.

**CASE:** 29 years old, female patient, university graduate, single, unemployed, lives with her family in Istanbul. She applied to our polyclinic with complaints of increased energy, increased self-confidence, decreased need for sleep, and spending a lot of money for nine days. The patient consulted psychiatry for the first time in 2009, she didn't leave the house because she thought people were talking about her and being followed. She states that people on the street laugh at her and she states that she thinks this is a fact.

When she applied to psychiatry in 2017 with complaints of grandiosity and spending a lot of money she spent 15 days in the psychiatry service. When her episodic was examined, it was seen that she was discharged with the diagnoses of "psychosis not otherwise specified" and "bipolar disorder". It was understood that he had been using valproic acid 1,000 mg/day and aripiprazole 30 mg/day regularly for the last 6 months. She stated in his personal history that he had been treated for type 1 DM for 15 years. There was no history of mental disorder in her family history. In the mental status examination, the patient was fully oriented and his psychomotor activity was increased. Her mood was euphoric and her affect was anxious. Her thought content included persecutory delusions that people were following her and that they would harm her and she did not describe hallucinations. Physical examination and vital signs were normal. Valproic acid blood level was determined as 78.3. It was decided to add lithium 900 mg/day to the current treatment of the patient. In the control examinations, it was observed that the patient's mania symptoms decreased, she stated that she felt more comfortable when she went out.

**DISCUSSION:** Schizoaffective disorder is one of the most frequently misdiagnosed psychiatric disorders. In bipolar disorder with psychotic features, psychotic symptoms are only present in the manic phase, and this is the main distinguishing factor between these two closely related psychiatric disorders. In our case the patient was diagnosed with schizoaffective disorder. Some research shows that lithium and valproic acid combination therapy in bipolar disorder is more likely to prevent relapse than valproic acid monotherapy. In this case, after starting lithium and valproic acid combination therapy, the patient's symptoms decreased and she became euthymic. Although this shows us that mood stabilizers can also be used in the treatment of schizoaffective disorder, it is open to discussion.

**Keywords:** schizoaffective disorder, mood stabilizers, manic episode, combination therapy

## IN HERB WE TRUST(?): INCREASE IN SERUM LITHIUM LEVELS INDUCED BY MELISSA OFFICINALIS USE: A CASE REPORT

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**OBJECTIVE:** The use of medicinal herbs is widespread in our country as well as in the world. These herbs can cause drug interactions due to the many active ingredients they contain. Melissa officinalis, popularly known as lemon balm or melissa, is also widely used due to its putative anxiolytic, hypnotic and sedative effects. Although studies on M.officinalis have increased in recent years, information on drug interactions is limited. There were no case reports in the literature regarding the interaction between lithium and M.officinalis.

**CASE:** A 58-year-old female, who was a housewife with 3 children and lived with her family. She was first diagnosed with bipolar disorder(BD) 5 years ago and lithium was started at that time. She has been followed up since December 2018 at our clinic. She is also using treatment for diabetes mellitus. The euthymic patient applied to the outpatient department for routine controls. Serum lithium levels ranged 0.66-0.82 mmol/L in the previous follow-ups, and were detected as 0.9mmol/L and then 1.00mmol/L at the last follow-up. There were no signs of lithium intoxication in her. The lithium dose was reduced from 600/900 mg/d to 600 mg/d. At her next follow-up, lithium level was 0.98mmol/L. When the dietary changes were investigated in the patient who did not use additional medication and used her treatment regularly, it was learned that she started to consume 1 cup of melissa tea daily because she thought that it would make it easier to fall asleep. Considering that the patient had been taking lithium regularly for the last 5 years and her treatment compliance was good, it was thought that the change in lithium levels was caused by the interaction of melissa tea. However, it was learned that the patient, who consumed 10-12 cups of black tea daily before consuming melissa tea, recently consumed 4 cups of black tea daily. Since it is known that theophylline decreases the lithium level, the possibility that the relative reduction of theophylline may be responsible for the increase in the lithium level was also considered. It was decided with the patient to stop the consumption of Melissa tea completely and to limit the consumption of black tea to 4 cups. After 1 week, the lithium level was found to be 0.71mmol/L. Consent was obtained from the patient and her relatives.

**DISCUSSION:** Lithium, which is one of the first-line options in the acute and maintenance treatment in BD, has a very narrow therapeutic range and there are many reasons that increase its serum level. NSAIDs, thiazide diuretics, and ACE inhibitors are the best known potential drugs for drug interactions with lithium. There are many clinical and experimental studies in the last 10 years on traditionally used M.Officialis and other herbs. However, pharmacokinetic mechanisms and drug interactions are not clear enough. Given the widespread use of complementary therapies for mental health complaints among patients, clinicians should be more cautious about the harms of herbal complementary therapies. Our case report is the first study to report the relationship between M.officinalis and lithium.

**Keywords:** bipolar disorder, drug interactions, lithium, melissa officinalis, medicinal herbs

## OLFACTORY HALUCINATIONS AFTER BUPROPION USE: A CASE REPORT

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**OBJECTIVE:** Bupropion is a second generation antidepressant that acts as a norepinephrine and dopamine reuptake inhibitor. The relatively low risk of side effects provides the advantage of use. The most common side effects are dry cough, nausea, constipation, headache and insomnia. In addition, lowering the epileptic seizure threshold and increasing the probability of seizures are considered among its disadvantages. In this case report, it is aimed to draw attention to rare side effects by presenting a case who developed olfactory hallucination after the use of slow-release bupropion. The patient's consent was obtained for the case report.

**CASE:** Ö.Ö. 28 year-old, single, university graduate, female patient. She applied to the polyclinic with complaints of unhappiness, increased appetite and weight, low energy, increased amount of sleep, and anhedonia. Beck Depression Scale score was 27 and she was diagnosed with major depression according to DSM-5. Fluoxetine 20 mg/day was prescribed because she had benefited from the use of fluoxetine before with the diagnosis of major depression. After 2 months of regular use of fluoxetine 20 mg, the patient's complaints did not improve, and treatment was switched to bupropion slow-release tablet 150 mg/day. The patient, who developed insomnia and headache in the first week, later tolerated them. Her depressive symptoms were greatly reduced in the first month of bupropion use. As the scale score decreased to 14, it was decided to continue bupropion. At the end of the 2nd month, it was reported that the patient had 3 weeks of olfactory hallucinations as urinary odor, occurring 1-2 times a week for 5-10 minutes, and that the patient was conscious during this period. The patient stated that she had not taken the drug for 2 days. The patient's neurological examination was normal, routine blood and urine tests, and cranial MRI results were reported as normal. There was no history of epilepsy or psychotic disorder in the patient's medical and family history. No olfactory hallucination developed during the follow-up of the patient. It was thought that the patient's olfactory hallucinations might be due to bupropion.

**DISCUSSION:** Neuropsychiatric side effects such as vivid dreams, attention, perception and memory changes, visual hallucinations and delusions, vertigo, catatonia, insomnia can be seen less frequently with the use of bupropion. Case reports of hallucinations during bupropion use have been reported in the literature. Although most of these have been reported as visual hallucinations, there are also cases with auditory, tactile, olfactory and gustatory hallucinations. Although rare, hallucinations may develop with both therapeutic and overdose drug use during bupropion therapy. This seems likely to be related to increased dopamine or its metabolites. EEG was not performed in our case against the possibility of epilepsy was seen as a deficiency. Because of the patient has no previous history of seizures and absence of complex partial seizures with automatism, which is typical in temporal lobe epilepsy, the possibility of epilepsy has been ruled out. Although bupropion is considered quite safe in terms of its side-effect profile, one should be sensitive about all kinds of side effects, including psychotic findings, that may occur during treatment.

**Keywords:** bupropion, hallucinations, olfactory, side effects

## THE COMPARISON OF EATING DISORDER PREVALENCE IN PATIENTS WITH BIPOLAR DISORDER TYPE-1 AND TYPE-2: PRELIMINARY FINDINGS

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**BACKGROUND AND AIM:** Bipolar Disorder (BD) is a complex and severe mental illness that is often prescribed long-term medication conducive to increased appetite, food intake, and weight gain. Even though bipolar and eating disorders often co-occur, clinical evidence regarding types of illness is limited. This study aimed to compare and contrast the risk of eating disorders, high Body Mass Index (BMI) and obesity in the Turkish sample with bipolar disorders based on Type-1 and Type-2. It is hypothesized that the prevalence of eating disorder symptomatology differs by diagnostic group (Type-1 and Type-2).

**METHODS:** 91 patients voluntarily filled out an online consent form and a set of scales consisting of the Eating Disorder Examination Questionnaire (EDE-Q) between August 2020 and June 2021 in Ankara University, School of Medical following ethical approval (No: 2021/278). The chi-square test was performed to investigate differences in EDE-Q scores between the diagnostic group,

**RESULTS:** Our sample consisted of patients with BD Type-1 (68.1%) and BD Type-2 (31.9%). Both groups had comparable socio-demographic characteristics. The majority of participants in either group were female (Type 1: 58.6%; Type 2: 58.6%), had a college or university diploma (Type 1: 69.4%; Type 2: 69.0%), and were employed (Type 1: 32.3%; Type 2: 41.4%). Few participants (26.4%) declared the presence of other psychiatric diagnoses. Most patients substantially reported using polypharmacy (84.6%). According to descriptive analysis findings, the highest two percentages for the general sample were in the BMI categories of obese (38.5%) or overweight (31.9%). These percentages were similar for people with Type 1 (obese: 38.7%; overweight: 33.9%). However, BMI values for people with Type-2 substantially were in obese (37.9%) or normal categories (34.5%). Analyses also demonstrated that eating disorder comorbidity prevalence in patients with BD was 17.6%. Specifically, patients with Type-2 (24.1%) had greater eating disorder symptoms than patients with Type-1 (14.5). However, chi-square test findings demonstrated that this difference was not significant ( $\chi^2 = 1.26, d = 1, p = 0.26$ ).

**CONCLUSIONS:** The findings indicate that individuals diagnosed with BD are at risk for high risk of BMI, obesity, and eating disorders. The prevalence of eating disorder comorbidity is high in patients with Type-1 and Type-2 relative to the community sample. Comorbid eating disorder risk in patients with BD Type-2 might be greater despite insignificant chi-square test results. Nevertheless, some of the limitations of using online self-report during the COVID-19 pandemic should be considered. Further studies with a larger sample size could investigate possible differences based on illness types to prevent Type-2 error. Overall, early screening and regular monitoring of the prevalence of eating disorders and therapeutically tackling obesity risk might require more attention in the field of bipolar disorder.

**Keywords:** bipolar disorder, Type-1, Type-2, eating disorders

## FREQUENCY AND PREDICTORS OF PREMENSTRUAL DYSPHORIC DISORDER AND ITS ASSOCIATION WITH AFFECTIVE TEMPERAMENTS

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**BACKGROUND AND AIM:** Premenstrual Dysphoric Disorder (PMDD) is a clinically important condition that affects a significant proportion of women and causes deterioration of quality of life. It was aimed to estimate the frequency of PMDD and its relationship with demographic and clinical variables and affective temperaments.

**METHODS:** An online survey form including sociodemographic data, Premenstrual Symptoms Screening Tool (PSST) and Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Temperament Auto-questionnaire (TEMPS-A) was applied to 408 healthy women between October 2020 and February 2021. The snowball sampling method was used. Ethical approval of this study was granted by the Ethical Committee of Gazi University on 10.05.2019 with the number of E.59828.

**RESULTS:** A total of 408 women participated in this study. The mean age was 29.6±8.3. The frequency of PMDD and moderate to severe PMS were 13.2%, and 14.5%, respectively. Having a psychiatric disease, positive family history of psychiatric disease, suicide attempts, and anxious temperament were significantly higher in the PMDD group. Cyclothymic and anxious temperaments had a positive predictive effect for the PSST Section A scores.

**CONCLUSIONS:** Our findings show a possible relationship between anxious and cyclothymic temperament traits and PMDD symptom severity. However, since there was no structured interview for PMDD diagnosis in this study, it is rational to interpret the results cautiously.

**Keywords:** affective temperament, anxious temperament, cyclothymic temperament, premenstrual dysphoric disorder, premenstrual syndrome

## FUNCTIONAL NEUROLOGICAL SYMPTOM DISORDER WITH DYSARTHRY AND DIPLOPIA: A CASE REPORT

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**OBJECTIVE:** Functional neurologic symptom disorder (conversion disorder) is a disease that affects voluntary motor and sensory functions but is not based on an organic pathology. Since the disease develops after some traumas and stressors, it is estimated to be caused by psychological factors. Although the symptoms are not produced voluntarily in conversion disorder, the primary gain is psychological, not social, financial, or legal. According to the data, conversion disorder is more common in rural populations, people with a low level of education, and people from lower socioeconomic groups. Paralysis, blindness, and mutism are the most common signs of conversion, and the symptoms of conversion disorder do not define the diagnostic of neurological diseases. This study aimed to present a case of post-stressor conversion disorder with diplopia and dysarthria.

**CASE:** A 44-year-old female patient was consulted after she applied to the emergency department with complaints of diplopia and dysarthria that started after a familial stressor. Her complaints have been going on for one week. The patient was consulted by neurology and ophthalmology. No organic pathology was found after diagnostic tests. It was learned that the patient had major depression with complaints of sadness, anhedonia, and insomnia four years ago. After sertraline 100 mg/g treatment was applied, symptoms had regressed. The current clinical impression of the patient was evaluated as a conversion disorder. The treatment of the patient, who also had complaints of depression and insomnia, was adjusted to include sertraline 150 mg/d and alprazolam 1 mg/d. During the hospitalization, insight-oriented therapy and behavior therapy were applied to the patient. After the treatment, the diplopia was cured, and there was a significant regression in dysarthria. Written informed consent was obtained from the patient whose case was presented to contribute to the scientific literature.

**DISCUSSION:** Conversion disorder occurs when unconscious intrapsychic conflicts are suppressed and anxiety is transformed into a physical symptom. Patients may have medical and neurological disorders as medical co-diagnosis. Evidence of previous or ongoing neurological disorders has been reported in 18–64% of patients hospitalized with a diagnosis of conversion disorder. Therefore, a medical and neurological examination should be performed in all cases, and neurological disorders, brain tumors, and basal ganglia diseases should be considered in the differential diagnosis. Although the symptoms of patients diagnosed with conversion disorder spontaneously regress after the definitive exclusion of medical diseases, insight-oriented therapy, and behavioral therapy can facilitate this regression.

**Keywords:** conversion disorder, dysarthry, diplopia

## VORTIOXETINE TREATMENT IN POST-STROKE DEPRESSION

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**OBJECTIVE:** Depression is the most common psychiatric disease following stroke. There is a bidirectional relationship between depression and cerebrovascular disease(CVD). As well as stroke increases the risk of depression, depression can also have a marked effect on the development of stroke. Post-stroke depression(PSD) is included in the DSM-V as Major Depressive Disorder(MDD) due to another medical condition. PSD is a quite common disorder; that is, meta-analyses have shown the prevalence of PSD is approximately 33%. Nonetheless, it is not both recognized and treated enough. Therefore, better strategies of screening, prevention, and treatment are needed. We aim to present the diagnosis and treatment approach of our case with PSD. Consent has been taken from the patient for the case report.

**CASE:** A 53-year-old female patient had complaints of forgetfulness, insomnia, and low mood after CVD. According to her medical records; there was a nonaneurysmatic subarachnoid hemorrhage(SAH) around the 4th ventricle in CT-Angiography and Digital Subtraction Angiography, and she was discharged after resorption of the SAH area. Neurological examination was normal when she applied to us. Mental status examination revealed that she had symptoms of depressed mood, feelings of worthlessness, anhedonia, insomnia, which had continued for 10 months after CVD. Also, the patient was noted to have apathy, excessive fatigue, pain, and lethargy. There was a history of depression according to the anamnesis, but it is learned she was in remission for five years, before CVD. Hamilton depression rating scale(HDRS) scores were 28 points. Escitalopram 10mg/per day was started on the patient with the diagnosis of PSD. In the six weeks follow-up period with escitalopram treatment she experienced no improvement in her symptoms. MoCA(Montreal Cognitive Assessment) was performed because of complaints of forgetfulness, difficulty in focusing, and its total scores were 25 points(out of 30). She had deficiencies in visuospatial functions, attention, abstract thinking, and delayed recall. Thus, Vortioxetine 5-10mg/per day was started instead of Escitalopram. Her complaints decreased significantly in the second month of Escitalopram treatment. MoCA was re-administered to assess cognitive functions and the total scores of MOCA was 28 and HRDS scores were 16 points. To conclude, it was shown that the patient's depressive symptoms decreased, and cognitive functions improved with vortioxetine treatment.

**DISCUSSION:** Post-stroke depression is associated with a physical disability, and cognitive impairment; moreover, more severe depressive symptoms, less anhedonia, and fewer sleep disturbances than MDD. Although there are considerable differences between PSD and MDD, it may be difficult to distinguish between these two conditions on account of their close relationships. The difficulty of differential diagnosis with MDD may lead to the underrecognition and undertreatment of PSD. Treatment of PSD consists of a combination of pharmacological, psychosocial, and stroke-related treatments. Antidepressants are widely used in pharmacological treatments. In the present case, antidepressant treatment is preferred. The efficacy of vortioxetine in depression, especially in cognitive symptoms of depression may also suggest effectiveness of vortioxetine in post-stroke depression therefore we applied Vortioxetine treatment to our patient. This case report may serve as an example in treatment of other similar cases.

**Keywords:** Post-stroke depression, vortioxetine, cognitive symptoms.

## MAJOR DEPRESSION DISORDER COMORBIDITY IN A PATIENT DIAGNOSED WITH ACHONDROPLASIA - A CASE REPORT

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**OBJECTIVE:** Achondroplasia is the most common skeletal dysplasia that develops as a result of mutations in the gene encoding the FGFR3 protein, is inherited in an autosomal dominant manner and is compatible with life. FGFR3 is a regulator gene involved in growth plate and linear bone elongation. Unfortunately, studies examining quality of life and psychiatric comorbidities in adults with achondroplasia are limited. In this study, the aim was to present a case who was diagnosed with achondroplasia and developed treatment-resistant depression after stress exposure.

**CASE:** A 51-year-old female patient, who was diagnosed with achondroplasia at the age of 5 years, applied to us due to having symptoms such as unhappiness, reluctance, lack of pleasure, and having repeated convulsions. Her complaints started after the loss of an object in 2013 and increased after the loss of a second object which was 8 months ago. It was understood that she had a shy personality in her premorbidity, she had applied to the psychiatry outpatient clinic with similar symptoms, and her last treatment was venlafaxine 75 mg/day, sulpiride 50mg/day, and mirtazapine 30 mg/day for 6 months. The blood tests performed were normal. The diagnosis of the patient was evaluated as major depressive disorder. Sulpiride dose was increased to 200 mg/day. Venlafaxine treatment was stopped due to limited beneficial effect and hence duloxetine treatment was started. Duloxetine was increased to 120 mg/day. Since her somatic symptoms continued, amisulpride treatment was started, and the dose was increased to 200 mg/day. Significant regression was observed in her somatic symptoms at approximately the 3rd week of the treatment. Repetitive transcranial Magnetic Stimulation (rTMU) was applied to the patient whose depressive symptoms continued to appear. After 12 sessions, the patient's depressive symptoms regressed significantly and his social functionality improved. It was planned to follow up the patient to continue rTMU sessions. A detailed written informed consent was obtained from the patient in case of carrying out a research study.

**DISCUSSION:** There are limited studies in the literature about the relationship between achondroplasia and psychiatric disorders. Looking closely to other existing studies, it was stated that psychiatric disorders were more common in adults with achondroplasia compared to general population, and depression and anxiety symptoms were more common. However, more studies are needed to prove the relation between psychiatric disorders and rare genetic diseases such as achondroplasia in order to improve the quality of life of these patients.

**Keywords:** achondroplasia, depression, treatment resistant, repetitive transcranial magnetic stimulation

## FIRST EPISODE PSYCHOSIS IN A CASE WITH CHURG STRAUSS SYNDROME

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**OBJECTIVE:** Psychosis can be a symptom of other medical diseases, especially neurological, endocrinological and immunological diseases, as well as psychiatric disorders. These patients also primarily admit to the psychiatric outpatients clinic. In this report, the first psychotic episode that occurred in a patient with Churg Strauss who was under irregular treatment and who had a rapid response to treatment will be presented. An informed consent was obtained from the patient.

**CASE:** A.O is a 53 years old female, non- working, married who lives with her husband and son. She had been followed up with Churg-Strauss syndrome for about 6 years. The patient had no known significant psychiatric disease before. She applied to our polyclinic with the symptoms of anhedonia, guilt thoughts, behavioral disturbances and incredulity that started after a stressful life event 10 days before. It was learned that the patient refused to eat and did not take the drugs of 8 mg/day of methylprednisolone and 100 mg/day of azathioprine. In the mental state examination, the patient was conscious and his reluctance and defensive attitude was striking. It was considered that the patient, who gave skeptical answers to the questions of the interviewer, had persecution delusions in his thought content and did not have insight. The patient, whose differential diagnoses were thought to have psychotic disorder due to another medical condition and major depression with psychotic features, was admitted to our service for further investigations. No organic pathology was found in the patient who was consulted to the neurology, endocrinology and rheumatology departments. Treatment of 8 mg/day of metiprednisolone and 100 mg/day of azathioprine was gradually adjusted. Intramuscular 10 mg/day of haloperidol and 5 mg/day of biperiden were started to the patient who had treatment rejection and became agitated. The patient's agitation regressed on the 7th day of her hospitalization, and the treatment was arranged as 4 mg/day of risperidone. The patient, whose psychotic symptoms disappeared in a short time during the follow-up, was discharged with full recovery on the 20th day of her hospitalization.

**DISCUSSION:** Although there are many case reports about the occurrence of psychosis due to systemic steroid use, there is a case report that steroid treatment is beneficial for ameliorating psychosis in particular in Churg Strauss syndrome. In our case, a rapid response was obtained with antipsychotic treatment in addition to immunosuppressive treatment in the sudden onset of psychosis after treatment interruption. We think that our case is valuable in that it shows the importance of a collaborative approach in the treatment of psychosis as well as that psychotic manifestations can develop in this patient group.

**Keywords:** Churg Strauss syndrome, steroid, psychosis

## DELIRIUM AFTER ELECTROCONVULSIVE THERAPY: A CASE REPORT

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**OBJECTIVE:** Delirium is an acute confusional state characterized by an alteration of consciousness with a reduced ability to focus, sustain, or shift attention. Delirium develops over a short period (usually hours to days) and tends to fluctuate during the day. Delirium is typically caused by a medical condition, substance intoxication, or medication side effect.

Even though there are many studies, the most accepted theory is that delirium is an impaired consciousness syndrome characterized by brain function disorder due to neuronal membrane dysfunction caused by the brain's neurotransmitter systems' imbalance.

The goal of Electroconvulsive therapy (ECT) is to produce a cerebral seizure under general anesthesia. ECT is mainly used to treat severe depression, but it is also shown to be effective for patients with other conditions, including bipolar disorder, schizophrenia, catatonia, and NMS. In this case, we present a patient having a psychotic attack who has developed delirium after ECT treatment which was performed due to his/her refusal of eating and drinking.

**CASE:** A 68-year-old female patient who has never been to a psychiatric clinic has applied to us due to refusal of eating and drinking. After taking a detailed medical history, it is understood that patient has been having ongoing persecution and paranoid delusions and auditory hallucinations. The patient is hospitalized to make a differential diagnosis and treatment arrangement. It is approved to start an antipsychotic treatment (risperidone 6 mg/day) as well as ECT treatment to the patient rejecting to eat and drink. The patient had visual hallucinations and fluctuating impaired attention, orientation and consciousness 18-24 hours after having the 4th ECT session and it was observed that symptoms aggravated during night time and the patient's amount of sleep were decreased. These early developed symptoms were evaluated as 'hyperactive delirium' and in regarding that extensive blood tests were requested however no pathology was encountered to explain developed delirium. The ECT treatment was stopped immediately, haloperidol 0,5 mg was added to order in case of necessity and during the sixth day of the treatment the delirium symptoms were regressed. The continuation of ECT was found inappropriate. It was observed that the patient's psychotic symptoms were regressed and insight about the disorder was gained after being hospitalized for two months. A detailed written consent was provided by the patient whose clinical picture was presented for contribution to literature.

**DISCUSSION:** The most important clinical indications of ECT are the medical and psychiatric fields where the rapid and precise response is required. Delirium is an uncommon side effect after ECT. According to recent studies, delirium after ECT is seen in less than 12 % of patients. Delirium after ECT is generally considered to be a self-limiting condition lasting less than 1 hour, but severe and longer-lasting cases are also rarer. There are limited case reports in the literature in comorbid conditions such as cerebrovascular disease, Parkinson's disease, dementia, and polypharmacy after ECT delirium. Therefore, further clinical studies are required for the delirium observed after ECT.

**Keywords:** Electroconvulsive Therapy, Schizophrenia, Delirium

## OBSESSIVE COMPULSIVE DISORDER SYMPTOMS THAT AGGRAVATED BY ISOTRETINOIN TREATMENT

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**OBJECTIVE:** Isotretinoin treatment is used for many dermatological diseases, including acne. It is thought to have many side effects, as well as psychiatric side effects. In the literature, the course of isotretinoin treatment induces obsessive compulsive disorder (OCD), anxiety and hostility. In this case report, it is drawn attention to that increase the symptoms after isotretinoin treatment in a female patient with known OCD. Consent was obtained from the patient.

**CASE:** A 24-year-old university student female patient. Her first complaints were religion-themed obsessions, obsessions with contamination and suspicion-themed obsessions about 5 years ago. The patient, who was treated with 150 mg/day of venlafaxine and 5 mg/day of aripiprazole in an external center, admitted to our clinic for the first time in 2018. 150 mg/day of venlafaxine was continued and gradually reduction was planned for the patient who did not have active complaints. The patient's symptoms had ameliorated after three months, and the treatment was reduced to 112,5 mg/day of venlafaxine. After one month, remission of patient was maintained, and the treatment was reduced to 75 mg/day of venlafaxine. The patient's treatment with 75 mg/day of venlafaxine was continued for approximately one year. The patient did not use it for eight months on her own request. During that eight months, the patient did not admit to outpatient clinic. The patient admitted to our center in October 2021 and had severe obsessions and compulsions, disturbed sleep patterns and passive suicidal thoughts. During her hospitalization, it was learned that she had been using 40 mg/day of isotretinoin for a month. It was thought that the worsening of symptoms could be due to the isotretinoin treatment. Isotretinoin was discontinued at the recommendation of dermatology. In addition, her medical treatment was arranged as 40 mg/day of fluoxetine, 2,5 mg/day of aripiprazole and 60 mg/ day of propranolol. The patient was discharged after significant benefit from hospitalization.

**DISCUSSION:** Isotretinoin is an agent that has been used in the treatment of acne for years and has some side effects. There are publications in the literature that isotretinoin causes prefrontal dopaminergic imbalance and decreases orbitofrontal metabolism. It has been hypothesized that these changes lead to the emergence of OCD. In our case, who has been diagnosed with OCD for a long time and whose well-being has continued in recent years, worsening of symptoms after starting isotretinoin may be compatible with the information in the literature. We think that it is beneficial to be aware for obsessions and compulsions in patients while using isotretinoin.

**Keywords:** Isotretinoin, obsessive compulsive disorder, side effects.

## HALOPERIDOL USAGE IN CASE OF NEUTROPENIA TRIGGERED BY PSYCHOTROPIC DRUGS: CASE REPORT

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**OBJECTIVE:** Neutropenia can be seen following antipsychotic use. In this case report, we will discuss haloperidol and lithium usage in the case of neutropenic schizoaffective disorder patient triggered by usage of many different psychotropic drugs.

**CASE:** A 33-year-old female patient, who was followed up since 2005 with the diagnosis of schizoaffective disorder, was in remission with haloperidol, biperiden, and chlorpromazine treatment between 2005 and 2009. When she complained of weakness and when the white blood cell and neutrophil values were seen low in the hemogram test, her medications were discontinued. Informed consent was obtained from the patient for the case report.

Between 2009 and 2014, valproate, olanzapine, clozapine, paliperidone, amisulpride, ziprasidone treatments were used; none of these drugs could be used at the adequate time and effective dose due to recurrent low blood cell count and neutrophil levels. Lithium 900 mg/day, olanzapine 30 mg/day, and lorazepam 7.5 mg/day treatment were started for the patient hospitalized in 2017 with grandiosity, persecutory delusions, aggressiveness, and irritability. Olanzapine and lorazepam treatment was discontinued due to low blood values (WBC). Since the patient's irritability and delusions continued, antipsychotic medication could not be administered, so ECT was administered. In the patient whose aggressiveness and irritability decreased after seven sessions, aripiprazole, amisulpride, olanzapine, risperidone, quetiapine, and trifluoperazine treatments were tried in addition to lithium treatment in the follow-ups since 2017 and were discontinued after low white blood cell, and neutrophil values (WBC) were observed. The treatment of the patient, who was hospitalized on 06.09.2021 due to insomnia, aggressive behaviour towards his mother and father, and persecution delusions, was arranged as lithium 600 mg/day, alprazolam 2x0.25 mg and haloperidol 2x5 mg. After a week, the lithium level was 0.48, and the lithium dose was increased to 900 mg/day. After the patient's mood was euthymic and her psychotic symptoms regressed, alprazolam was gradually decreased and discontinued during the ward observations. She was discharged after her treatment was arranged as lithium 900 mg/day haloperidol 10 mg/day.

**DISCUSSION:** Many psychotropic agents have been associated with neutropenia and/or agranulocytosis. Leukopenia and neutropenia associated with typical and atypical antipsychotics can be life threatening. In case of detection of haematological changes at this level, it is recommended to change the given antipsychotics. Clinicians should be aware of this possibility and regularly monitor blood counts in patients receiving such agents or warn the patient that fever and/or infection may be signs of this toxicity. In this case, we see the importance of following up the haematological examinations during the treatment process in patients using atypical and typical antipsychotics. It was observed that the symptoms were in remission, and neutropenia did not develop with the use of haloperidol and alprazolam in the patient who had previously developed neutropenia with the use of multiple psychotropic drugs and therefore could not use psychotropic drugs at adequate doses and for a long time. At the same time, the addition of lithium to the treatment of neutropenia due to typical and atypical antipsychotics may be beneficial in improving haematological and clinical manifestations

**Keywords:** Haloperidol, Neutropenia, Schizoaffective disorder

## HYSTERIA OR RESTLESS GENITAL SYNDROME

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**OBJECTIVE:** Persistent genital arousal disorder (PGAD), formerly known as Restless Genital Syndrome (RGS) is an uncommonly reported health concern. PGAD requires female patients to meet the following five criteria: (1) genitals are persistently aroused, (2) arousal remains following orgasm or requires multiple orgasms to diminish, (3) arousal is unrelated to desire, (4) arousal is triggered by both sexual and non-sexual stimuli and (5) symptoms are intrusive and unwelcomed. We present here a case report of a 22 year old woman who developed PGAD symptoms. Her symptoms ultimately improved with the use of pramipexole, a dopamine D3-preferring receptor agonist typically used to treat Parkinson's Disease and Restless Leg Syndrome.

**CASE:** Ms. S, was a 22-year-old single female. She had hysterical seizures and spontaneous genital arousals up to 4-5 times a day, lasting for 20-30 minutes each. She went to neurology with these complaints. On neurological examination no symptoms or signs of damage to the central or peripheral nervous system were found. EEG was taken to eliminate possible epileptic foci and was within normal limits.

Neurology referred the patient to psychiatry. She stated genital arousal occurred on its own especially in the evenings or nights without any previous feeling of sexual desire. The patient's complaints were suspected to be related to conversion disorder. The patient was started on paroxetine 20 mg/day pharmacotherapy together with analytically oriented therapy. In addition to paroxetine, clonazepam 1 mg/day was added. Four weeks later paroxetine was increased to 30 mg/day; and clonazepam was stopped at the end of the second month. Paroxetine was switched to duloxetine 60 mg/day due to sedative side effects. In addition to hydroxyzine 100 mg/day was added. A subsequent therapy (duloxetine at 60 mg/day and hydroxyzine at 100 mg/day) was stopped after one month due to a lack of efficacy.

We predict the patients conditions may have been related to PGAD. Pramipexole started at her admission. Pramipexole at a dose of 0.25 mg 1 to 2 hours before sleep reduced the frequency and the intensity of the genital discomfort. In the first month of treatment, genital arousal complaints had completely resolved with no masturbation behavior disturbing the patient during the day. Patient still using this treatment and her daily functioning returned to normal.

**DISCUSSION:** PGAD/RGS is associated with significant morbidity, including impaired activities of daily living, impaired cognitive and emotional states, depression, anxiety, and suicidal ideation.

In some publications, it has been stated that PGAD and restless legs syndrome have a similar underlying dopaminergic dysfunction. It is likely that an effective treatment window exists for the treatment of PGAD with drugs that possess the ability to exert their own control of dopaminergic transmission.

Future assessment of treatment options also should include the evaluation of psychologically based treatments for PGAD that specifically target the psychosocial, sexual, and relationship difficulties that women with PGAD experience.

The publication of the case was approved by the patient and the patient gave written consent.

**Keywords:** Hysteria, Persistent genital arousal disorder, Restless Genital Syndrome

## DEPRESSION WITH PSYCHOTIC AND CATATONIC FEATURES FOLLOWING AORTIC DISSECTION: A CASE REPORT

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**OBJECTIVE:** Surgical repair of aortic dissection is a major surgical operation and may cause central nervous system (CNS) dysfunction varying with the type of the operation, the duration of cardiopulmonary bypass, low extra-corporeal perfusion pressure, hypothermia, and intra-operative anesthetic complications, such as hypotension and bleeding. Herein, we present a case of depression with psychotic features accompanied by catatonic features that may be related to the intraoperative and postoperative medication of aortic dissection surgery. The patient's consent was obtained for the case report.

**CASE:** M.D. A 35 –year-old married male patient, without any personal or family history of psychiatric disorder, who had been unemployed for 3 months, and had no history of smoking, alcohol or substance use was operated for a ruptured thoracic aortic aneurysm. He had no psychiatric findings in the post-op follow-up period, and was discharged with metoprolol 50 mg bid and ramipril 10 mg daily. He applied to the psychiatry outpatient clinic with depressed mood, fatigue, anhedonia, insomnia, delusions of guilt, hearing "ordering voices", hypnagogic hallucinations, seeing "snake, spiritual beings" that started 15 days after his discharge from hospital. Quetiapine 25 mg daily, lorazepam 1 mg bid, sertraline 50 mg daily have been started, the patient who benefited from the treatment was hospitalized in our clinic due to the suicidal attempts with a sharp-object following the command of auditory hallucinations, during the period when the drug dosages were reduced. The treatment of the patient who meet the diagnostic criteria for depression with psychotic features according to DSM-5 has been started with aripiprazole 5 mg and sertraline 50 mg; dosages have been increased to 15 mg and 200 mg. Mutism and negativism were observed intermittently in follow-up, and the symptoms regressed dramatically with lorazepam. Metoprolol could not be discontinued because beta-blocker prophylaxis was required, but the patient's depressive mood, insomnia, auditory-visual hallucinations recovered with antidepressant and antipsychotic treatment.

**DISCUSSION:** The subacute findings that developed after a major operation suggested an operation-related etiology. The patient had been administered 250 mg pulse prednisolon IV and metoprolol infusion throughout the operation. In literature, postoperative depressive complaints, blunted affect, and confusion have been reported due to intraoperative propranolol infusion after thoracic aortic aneurysm. In a recent review, psychosis, confusion, visual hallucinations, hypnagogic hallucinations, vivid dreams and sleep disorders were reported as side effects of metoprolol. Metoprolol was not found to be associated with catatonia, but psychosis with catatonic features induced by steroid use was reported. Drug-related psychiatric symptoms begin acutely with initiation and discontinuation of steroids. Although our patient had a period of well-being for 15 days after the operation and medication, the absence of personal or family history of psychiatric disorders, good premorbid functionality, normal laboratory examinations, and the absence of pathology in cranial imaging support that the present symptoms may have developed due to the metoprolol medication.

**Keywords:** catatonia, depression, metoprolol, prednisolon, psychosis

## ENCEPHALITIS PRESENTED WITH CATATONIA-LIKE SIGNS IN A SCHIZOPHRENIC PATIENT

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**OBJECTIVE:** Catatonia is associated with various psychiatric and medical diseases. There is little research on the syndrome and the exact neurobiological relationships are unknown. In this case report, we present a chronic schizophrenic patient who was consulted to psychiatry by the emergency department with catatonia-like signs due to refusal to eat, unresponsiveness and inactivity. Our aim is to emphasize that there may be other medical conditions (infection, trauma, malignancy, etc.) other than psychiatric disorders in the etiology of catatonia.

**CASE:** 41-year-old male patient, followed up with the diagnosis of schizophrenia for 14 years. The patient was brought to the emergency service with complaints of refusal to eat, malnutrition, and unresponsiveness that had developed for ten days. He was consulted to psychiatry because of acute catatonia-like signs. It was determined that his conscious state was somnolence and he did not cooperate. Lorazepam challenge test (LCT) was performed to exclude catatonia in the patient who did not have waxy flexibility, rigidity, catalepsy, stereotype etc. complaints. There was no significant change in the level of consciousness in the patient who was given 1 mg of lorazepam two hours apart. He was intubated and followed on mechanical ventilator because of the regression in Glasgow coma scale in the emergency department follow-up. The patient's brain diffusion magnetic resonance imaging (MRI) showed mild cortical diffusion restriction in the bifrontal, precentral gyrus, and other areas. In lumbar puncture; No cells were seen in the cerebrospinal fluid (CSF) analysis. When the patient was evaluated with clinical and MRI findings, it was considered as encephalitis and empiric acyclovir and ceftriaxone treatment was started. Cardiac arrest was performed on the 7th day of hospitalization of the patient, and cardiac rhythm was obtained by performing cardiopulmonary resuscitation (CPR). His clinical condition did not improve during the follow-up period. The patient who did not respond adequately to the treatments in the intensive care unit died in the 41st day of hospitalization. Consent for the case report was obtained from the relatives of the patients.

**DISCUSSION:** We present a case of patient diagnosed with schizophrenia, admitted to emergency service with catatonia-like signs. This case illustrates the importance of follow-up and observation regarding examination and other medical conditions in schizophrenia patients. A systematic review reported that 20% of catatonia had a general medical cause, of which 29% was inflammation (including both infective and immune causes). Many infectious diseases have been reported to cause catatonia. It should be kept in mind by clinicians that even if the patient has schizophrenia, not every catatonia-like symptom may be related to schizophrenia.

**Keywords:** schizophrenia, catatonia, encephalitis

## A RARE SIDE EFFECT: DYSKINETIC MOVEMENTS ASSOCIATED WITH WITHDRAWAL OF CLONAZEPAM MEDICATION

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**OBJECTIVE:** Tardive dyskinesia (TD) is a group of abnormal and late-onset movement disorders of the tongue, jaw, trunk, and extremities caused by dopamine receptor blocking agents also called neuroleptics. TD is used to describe late hyperkinetic movement disorders such as stereotypy, akathisia, dystonia, tremor, tics, chorea, and myoclonus. Although the pathogenesis of TD is not known clearly, there is evidence that dopamine supersensitivity in the nigrostriatal pathway due to antipsychotics may lead to dyskinesic movements. Various hypotheses have also been proposed for the development of TD. These include dopaminergic hypersensitivity, the imbalance between dopamine and cholinergic systems, dysfunctions of striatonigral GABAergic neurons, and excitotoxicity. It is thought that the dyskinesic movements occurring in the case to be mentioned are primarily related to the disorder in striatonigral GABAergic activity.

**CASE:** A 64-year-old female patient with the diagnosis of schizophreniform disorder, followed in an external center, was in remission for a long time and was using 9 mg paliperidone, 300 mg quetiapine, 37,5 mg clomipramine, 4 mg clonazepam, 200 mg lamotrigine per day for a long time. Involuntary repetitive movements appeared around the patient's mouth after all medications were discontinued by the doctor who followed her. After the evaluation in our outpatient clinic, the patient's anxiety level was significant. It was thought that this was related to the sudden discontinuation of clonazepam. Diazepam treatment, a selective serotonin reuptake inhibitor, and olanzapine started patient was followed up closely with weekly controls. The appropriate dose of diazepam to reduce the anxiety level was determined by gradually increasing it in the follow-ups, and it was observed that the oral dyskinesic movements decreased as the dose was increased and disappeared in the follow-up. The dose of diazepam recommended to the patient started to be decreased with close follow-ups in the outpatient clinic. After the diazepam dose was stopped, the patient's oral dyskinesic movements started to appear again.

**DISCUSSION:** In addition to the dopamine hypothesis, many different hypotheses are mentioned in the development of TD, and the GABA hypothesis is one of them. According to the hypothesis of deterioration in the functions of GABAergic nigrostriatal neurons; a decrease in the amount of GABA in the globus pallidus and substantia nigra is associated with TD, as a result of direct or indirect damage to the GABAergic neurons that provide the balance between the striatopallidal pathways after exposure to antipsychotic drugs. Reduced activity in a subset of striatal GABA neurons has been suggested as the basis for TD, and this is supported by evidence from animal and human studies. A decrease in glutamic acid decarboxylase, a rate-limiting enzyme in GABA synthesis, has been demonstrated in neuroleptic-treated animals with a correlation with the development of dyskinesia. In the same study, bicuculline, a GABA antagonist injected directly into the substantia nigra, was observed to cause dyskinesia in rats. As a result, it is thought that GABA has a role in the etiopathogenesis of dyskinesic movements in the case mentioned. Consent was obtained from the patient regarding the poster presentation.

**Keywords:** GABA, involuntary movements, oral dyskinesia

## ORGANIC PSYCHOSIS SECONDARY TO BRAIN DAMAGE DUE TO CHEMICAL DAMAGE

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**OBJECTIVE:** Mixture of cleaning materials is one of the most common causes of poisoning due to chlorine gas. Toxicity level depends on the dosage and duration of exposure, where pulmonary symptoms begin at 15 ppm concentration and at 430 ppm the situation can be fatal within 30 minutes.

In this case report, we present a patient admitted to psychiatry clinic with psychotic findings, who had developed a CNS infarct due to cardiac arrest as a result of chlorine gas poisoning after mixing cleaning materials (written and verbal consent was obtained from the patient).

**CASE:** 56 year-old female patient, who had no known previous psychiatric conditions, was poisoned after she inhaled a mixture of salt spirit (Hydrochloric acid) and bleach (Sodium Hypochlorite) during cleaning, one month before she was admitted to our clinic. When she arrived in emergency room, cardiac arrest had happened, and after that the patient remained in anesthesia within ICU for 14 days. In that period, no pathology had been detected in cranial MRI scans. After regaining consciousness, she was admitted to our clinic with thoughts about her daughter plotting behind making plans to separate her from her husband. On mental status examination, the patient was conscious and oriented. Her associations were scattered in her thought process. She had persecution and referential delusions. Vital values and general physical examination was normal. Neurological examination revealed %70 vision loss, and 4/5 loss of motor function in lower left and upper extremities. Psychomotor activity was increased. Brain imaging (MR) performed in our service revealed changes in the posterior of both occipital and parietal lobes, lentiform and caudate nuclei bilaterally with symmetrical contrast enhancement and diffusion restriction in the parieto-occipital region.

The patient was followed up with a diagnosis of psychotic disorder, and antipsychotic treatment (olanzapine 2.5mg/d) was started with gradual increase (15mg/d) afterward. Symptoms of the patient regressed after a follow-up of 3 weeks, and she was discharged for further follow-up as outpatient. Afterwards, improvement in her symptoms was observed more clearly. (PANSS total scores, respectively on the day of admission to the service:85, at discharge:65, 2 months after discharge:47)

The psychotic symptoms of our case, which had developed due to CNS infarct after chlorine gas poisoning dependent cardiac arrest, regressed with antipsychotic treatment.

**DISCUSSION:** Neuropsychological sequelae may occur as a result of due to pulmonary complications of chlorine poisoning. In our case, these sequelae were manifested as psychotic symptoms, and olanzapine (15mg/d) was used for treatment. Improvement was observed during the 2-month follow-up period. It is stated in several cases that there may be a global effect over the brain in chlorine-induced poisoning. The probable cause of chlorine-induced brain involvement related to free oxygen radicals, yet, there exist no agreement on the effects of chlorine poisoning in the brain, particularly affected regions, and the timespan of healing.

Cases involving psychosis after stroke mostly involve lesions originating right hemisphere, with rarely cases involving bilateral and left hemisphere originated lesions.

**Keywords:** organic psychosis, chlorine gas toxicity, Brain Dysfunction, delusions

## ECT TREATMENT FOR AN INTELLECTUALLY DISABLED AND CATATONIC PATIENT

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**OBJECTIVE:** Catatonia is a psychomotor disorder that usually involves lack of movement and communication as well as agitation, confusion and restlessness. This phenomenon is often reported in patients with psychotic disorders. However, there is limited data on the association of catatonia with intellectual disability. In this case report, a patient with an intellectual disability who was successfully and fastly treated with ECT (Electroconvulsive Therapy) for a severe catatonia is described. The required consent was obtained from patient and her relatives.

**CASE:** An 18-year-old single female presented to the psychiatry inpatient service with complaints of mutism and decreased food intake and drinking for approximately 10 days. On mental status examination, she was found to have mutism, hypoactivity, blunted affect, wax flexibility, decreased food intake. Detailed history revealed that she had grandiose delusions, visual and auditory hallucinations for last 4 months. According to her family, her language development was delayed and she had severe learning disability since the primary school. In order to reveal possible underlying organic causes of catatonia, screening tests including hemogram, liver function test, renal function test, thyroid function test, serum electrolytes, routine urine test, electrocardiography, brain MRI and EEG were performed. No organic cause could be detected. After initial improvement with lorazepam 5 mg/day in divided doses, she was started on ECT on the third day of pharmacotherapy. After the second ECT, her mobility, verbal output and appetite has improved. After the fifth ECT, lorazepam dose was gradually reduced. On the 8th day of hospitalization, she was started on olanzapine 5 mg/day tablet to treat possible psychotic symptoms. She received 7 effective ECTs. At the end of the ECT course, due to emerging depressive symptoms, escitalopram 5 mg/day was added to the therapy. Her catatonic and depressive symptoms disappeared. According to her family members, her level of social interaction came back to her baseline. The diagnosis of borderline intellectual disability has been made during follow-up visits. She was discharged after 21 days of hospitalisation. On the third day of discharge, lorazepam treatment was discontinued. Olanzapine 5 mg/day and escitalopram 5 mg/day were continued thereafter.

**DISCUSSION:** Prevalence of psychotic patients having both catatonia and intellectual disability is low. After scanning the literature, there is only a limited amount of knowledge about the use of ECT in subjects with intellectual disability. As a result, this case report shows that ECT can be used effectively and without serious side-effects for catatonic patients with intellectual disability.

**Keywords:** catatonia, ECT, intellectual disability,

## COMPARISON OF OBSESSIVE COMPULSIVE DISORDER PREVALENCE WITH BIPOLAR DISORDER TYPE 1 AND TYPE 2 IN TURKEY: PRELIMINARY RESULTS

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**BACKGROUND AND AIM:** Bipolar disorder (BD) has high psychiatric comorbidity that negatively impacts the prognosis of the illness. In the literature, obsessive-compulsive disorder (OCD) comorbidity in patients diagnosed with BD has been reported as 17% globally; the prevalence for BD Type-1 was reported as 24.6%. Despite the limitations in Turkey studies, the OCD comorbidity rate was reported as 16.3% (Type-1: 11.9%; Type-2: 23.1%). This study aimed to investigate the prevalence of comorbid OCD in BD patients and compare BD Type-1 and Type-2 diagnoses. It is hypothesized that patients with BD Type-1 and Type-2 differ concerning the prevalence of OCD comorbidity.

**METHODS:** Following approval from the Ankara University Faculty of Medicine Clinical Research Ethics Committee (AUTFKAEK No: 2021/278), patients diagnosed with bipolar disorder in our psychiatric clinic between August 2020 and June 2021 were contacted through the registry system. Ninety-one patients voluntarily filled out an online consent form and a set of scales consisting of the Dimensional Obsession Compulsion Scale examining OCD symptomatology severity over the last one month.

**RESULTS:** Our sample consisted of patients with BD Type-1 (68.1%) and BD Type-2 (31.9%). Both groups had comparable socio-demographic characteristics. The majority of participants in either group were female (Type-1: 58.6%; Type-2: 58.6%). 30.8% of the participants completed their education until high school (Type 1: 30.6, Type 2: 31), and 69.2% of them had university or college diploma.

Few participants (26.4%) declared the presence of other psychiatric diagnoses. Two of those declared that they have a diagnosis of OCD. Most patients substantially reported using polypharmacy (84.6%). The findings demonstrated that 53.8% of the participants are at risk for the OCD diagnosis. This rate is 48.4% and 65.5% for people with BD Type-1 and Type-2. However, significant findings of OCD mean scores among the diagnostic group were not found in the chi-square test ( $\chi^2 = 2.33$ ,  $df = 1$ ,  $p = 0.12$ ).

**CONCLUSIONS:** The findings indicate that individuals diagnosed with BD included in our study are at substantial risk for OCD symptoms. This risk appears higher for patients with Type-2 but is not statistically significant. Nevertheless, some limitations of using online self-report during the COVID-19 pandemic should be considered. Further studies with a larger sample size could investigate possible differences based on disorder types to prevent Type-2 error. Our study reveals that screening for OCD symptoms in patients with BD may enhance prognosis and shape treatment approaches.

**Keywords:** bipolar, disorder, comorbidity

## EVALUATION OF TREATMENT ADHERENCE, REMISSION AND RELATED FACTORS IN PATIENTS WITH OPIOID USE DISORDER AND NALTREXONE IMPLANT APPLICATION

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**BACKGROUND AND AIM:** Opioid use disorders have become a crucial public health problem, with their prevalence increasing in recent years since it has devastating effects on the patient himself and relatives. New alternatives to oral agonist therapies created to combat opioid addiction.

Naltrexone, which is one of the opioid antagonist treatment approaches, has become an alternative treatment because it does not involve the risks of physical dependence and abuse, unlike agonist treatments. The long-acting slow-release form of naltrexone was found to have superior efficacy to oral naltrexone or placebo.

**METHODS:** The data of this study; Patients aged 18 and over, who were treated as an inpatient in our AMATEM clinic in 2019 and 2021, diagnosed with opioid use disorder according to DSM-5 diagnostic criteria, underwent naltrexone implant application. Data was collected retrospectively with the data form created by the researchers, sociodemographic data of the patients, data on opioid use, outpatient follow-ups after implant application and drug analysis in urine were obtained from the patient files. All data were analyzed with SPSS 22.0 package program. This study was approved by the Ethics Committee of Pamukkale University, 15.03.2022-E184601

**RESULTS:** Our study included 1(2.4%) female, 40 male (97.60%), a total of 41 patients; mean age was  $24.59 \pm 2.59$  (20-30). Of the patients, 80.5% (n=33) were single, 14.6% were married (n=6), and 4.9% (n=2) were divorced. While 68.3% (n=28) patients were secondary school graduates and 19.5% (n=8) high school graduates; The rate of primary school and university graduate patients was 4.9% (n=2) and 7.3% (n=3), respectively. 53.7% of the patients (n=22) were working in any job regularly. All of the group smokes and in addition to opioid use, the most frequently used substances were methamphetamine 19,5% (n=8), alcohol 12,2% (n=5), 9,8% (n=4) cannabis 9,8% (n=4) and its derivatives, and ecstasy 4,9% (n=2).

The mean duration of abstinence from the substance after the implant application was  $8.73 \pm 7.59$  (0-26) months. 38 of the patients did not have any other application after the implant applied by us; two 3 times; one of them had 2 more implant applications. According to the education, employment status, marital status, alcohol, extacy use, substance use, anti-HCV positivity and forensic history, the patients were found to be statistically similar in terms of the time they remained in remission after implant application ( $p > 0.05$ ). According to the use of cannabis and its derivatives, it was determined that those who stopped using cannabis ( $10,30 \pm 7,62$ ) remained in remission for a statistically significant longer time than those who used ( $3,50 \pm 1,91$ ) and never used ( $1,00 \pm 0,81$ ) cannabis ( $p = 0,009$ ).

**CONCLUSIONS:** Naltrexone implant treatment is a method that can be safely applied in the diagnosis of opioid use disorder. Although the remission periods after naltrexone implant are similar in terms of sociodemographic and substance use-related features; longer remission periods were found in the group of patients who stopped using cannabis in addition to opioid use. Considering that the goal for addiction treatment to be successful is to stay away from all substances, it is thought that our result supports this information.

**Keywords:** implant, naltrexone, opioid, remission

## PSYCHIATRIC SYMPTOMS AS THE FIRST MANIFESTATION OF CENTRAL NEUROCYTOMA: A CASE REPORT

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**OBJECTIVE:** Brain tumors often present with neurological findings due to mass effects. However, rare cases may present only with psychiatric symptoms. The central neurocytoma is a supratentorial tumor, mostly affecting young adults, and is typically located in the lateral ventricles. The tumor may cause neurological, visual, and mental disturbances. They account for 0.5 percent of all brain tumors. In this report, we aimed to present a case who has psychotic symptoms with no neurological signs and was diagnosed with a central neurocytoma located in the right lateral ventricle confirmed with magnetic resonance imaging (MRI).

**CASE:** A 22-year-old male patient was admitted to the emergency department after a suicide attempt. The patient's first psychiatric symptoms started 8 months ago with referential ideas, paranoid ideas about his older brother, and hostile behaviors according to information from his family. In order to treat suicidal risk, the patient was hospitalized as required. Physical and neurological examinations were normal. The patient has poor grooming. Affect was anxious while mood was dysphoric. Psychomotor activity, speech output and speed were normal. Persecutory, paranoid, and referential delusions were determined in the content of thought. He did not describe a hallucination. He had no reasoning and insight. No abnormality was detected in his routine biochemistry and hemogram screen. Computerized tomography (CT) scan of the brain showed the bilateral lateral ventricles were dilated. We planned a spectroscopic MRI with a contrast agent for a detailed structural image. MRI revealed a mass with microcystic spaces extending towards the septum pellucidum and thalamus in the right lateral ventricle. Conventional MRI findings were in favor of central neurocytoma. We consulted him to the neurosurgical team and it was decided to refer the patient to the neurosurgery clinic after discharge.

We initiated his treatment with haloperidol 20 mg/day, biperiden 10 mg/day, and quetiapine 100 mg/day. Haloperidol was switched to paliperidone and potentiated to 12 mg/day throughout treatment. Paliperidone long-acting injection of 150 mg/month was planned to increase his treatment compliance. Paliperidone oral doses were stopped. He was discharged after his delusions tailed off.

**DISCUSSION:** Brain tumors may be associated with a variety of psychiatric symptoms such as anxiety, personality changes, anorexia, depression, mania, and psychosis. The tumor in the lateral ventricle had a compressive effect on the thalamus and septum pellucidum. Recent studies provide evidence of thalamus abnormality in schizophrenia and reports show anomalies with the septum can cause psychotic symptoms in some patients. Multiple case reports include psychotic symptoms secondary to brain tumors. Increased internal pressure on the brain is the factor that may constitute the development of these symptoms. Basic studies and further research are needed to confirm these findings. Our findings state the importance of neuroimaging in patients with first psychiatric symptoms.

**Note:** Consent was obtained from the patient's relatives.

**Keywords:** Brain Imaging, Neurocytoma, Psychosis

## ADULT-ONSET SELF STIMULATING BEHAVIOR

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**OBJECTIVE:** Autism Spectrum Disorder (ASD), is a neurodevelopmental disorder characterized by deficits in cognitive skills, social and communicative behaviors. Self-stimulation behaviors seen in autistic individuals are considered as one of the defining characteristics. Self-stimulatory behavior consists of repetitive, stereotyped behavior that has no apparent functional effects on the environment, examples of which are rocking, hand waving and head weaving, mouthing or rubbing parts of one's body, mouthing or spinning objects. Below, we will share a case with self-stimulation behaviors that can be called atypical. There is no directly similar case in the literature. Verbal consent was obtained from our patient for the case report.

**CASE:** A 33-year-old female patient admitted to Ankara University School of Medicine Psychiatry Department presenting with breaking things in the house, self-mutilation and inappropriate speech. She also had a depressive episode due to unemployment about 10 years ago. At that time, she started to push at the windows of her own room and broke the windows. She started dealing with the boiler at home 8 years ago and was pushing and pulling the pipes, she broke the boiler once. About 7 years ago, after she had had a toothache, because of the urge to break her teeth, she started to apply constant pressure to her teeth and was biting hard objects, thus damaging all her teeth. A few years later, after the uncontrolled sexual intercourse, she began asking her father if he slept with her mother and had an urge to have sex particularly with her father. These behaviors have increased in the last 2 years; her family couldn't leave the patient alone at home for the last 1 year. Depressed mood, a dull facial expression, and having constant eye contact were remarkable in the examination. No psychotic symptoms were detected. The patient who had social communication problems in her history, got a high score on the Autism Spectrum Quotient. Clozapine was started for behavior control.

**DISCUSSION:** As it was understood from this patient's history and examination, it was thought that she might have autism spectrum disorder due to her inability to act in accordance with the social context, difficulties in establishing social relationships. Also, self-stimulatory behaviors are one type of such atypical behavioral cues used for the diagnosis. They refer to stereo-typed, repetitive movements of body parts or objects, such as arm flapping, head banging, and spinning. In this case, it was thought that the bending, pushing and pulling behaviors that would cause the patient to harm herself were the symptoms belonging to self-stimulatory behaviors.

**Keywords:** Autism Spectrum Disorder, Autism Spectrum Quotient, Self-Stimulatory Behavior

## ARACHNOID CYST IN A PATIENT WITH SCHIZOPHRENIA

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**OBJECTIVE:** Arachnoid cyst, constituting 1% of all intracranial lesions are rare and benign lesions containing cerebrospinal fluid. They are usually diagnosed incidentally and rarely manifest with any physical symptom. There have been some case reports highlighting the possible association between arachnoid cysts and psychiatric disorders, especially with psychosis. In this case report, a female patient diagnosed with an arachnoid cyst and schizophrenia- during her first psychiatric hospitalization will be presented and discussed by the literature. Patient's consent was obtained.

**CASE:** We report a case of 28 years old female patient who was admitted to the emergency unit with the complaints of thinking that she was being watched by cameras, followed by other people and her phone was being followed up, hearing voices, decreased sleep duration, grandiose and mystic beliefs, and occasional suicidal thoughts for the last 9 months. Mental state examination revealed that she was oriented. Her mood was depressed. She had paranoid, referential and grandiose delusions, auditory and visual hallucinations, increased psychomotor activity and impaired insight and judgement. No pathological findings were found in the neurological examination. No family member with a history of psychiatric disorder was described. As a part of the routine evaluation in first episode psychosis, cranial MRI examination was performed. An appearance compatible with an arachnoid cyst of approximately 83 x 50 x 73 mm in size was observed which was presented on right cranial lobe among at stated locations, starting from the supraventricular parietal lobe, continuing among the frontotemporal lobe inferiorly and ending anteriorly at the base of the temporal lobe. The patient consulted to the neurosurgery department. They did not have any additional treatment recommendations except outpatient follow-up. We started patient on risperidone 2mg/daily and sertraline 50mg/daily. We increased the dosage gradually up to 6mg/daily during her hospital stay. After the 37 days of hospitalization, she was discharged. Her positive psychotic symptoms were resolved completely.

**DISCUSSION:** In this case, arachnoid cyst was already present when the patient's first complaints have started. Due to the frontotemporal location of the cyst and absence of a family history of psychiatric disorders, we hypothesized that psychotic features might be related to the arachnoid cyst in some ways. Also, there are other case reports on the coexistence of arachnoid cyst and psychosis available in the literature. It is still difficult to determine whether the arachnoid cysts could cause a psychiatric condition, but future advances on the investigation of neuropsychiatric cases associated with brain structural disorders would reveal a causal relationship between psychiatric disorders and brain lesions.

**Keywords:** Arachnoid cyst, psychosis, schizophrenia

## AN ARDUOUS RIDDLE TO SOLVE: NEUTROPENIA WITH MULTIPLE ANTIPSYCHOTICS

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**OBJECTIVE:** Schizoaffective disorder (SD) is defined as an uninterrupted period of illness during which there is a major mood episode concurrent with the first criteria of schizophrenia and persisted delusions or hallucinations for more than 2 weeks in the absence of a major mood episode according to the DSM-5. Although the neutropenic effect of clozapine is widely known, neutropenia has been reported with other antipsychotics as a side effect in the literature. We aimed to present a patient with neutropenia triggered by clozapine and continued with other antipsychotics. We also aimed to mention our difficulties in finding the right antipsychotic treatment.

**CASE:** We report a 43-year-old female who was under psychiatric treatment since her twenties. She had recurrent hospitalizations with the diagnosis of bipolar disorder, psychotic disorder not otherwise specified, and SD respectively. She had been discharged from another hospital with the treatment including clozapine, quetiapine, and valproate four months ago. However, clozapine had been discontinued due to pancytopenia and elevated liver function tests(LFT)during the outpatient clinic controls. She had been hospitalized due to complaints including homicidal behavior and delusions while she was under treatment with quetiapine and valproate. Her blood tests revealed disturbed complete-blood-count(CBC) values. Due to the development of pancytopenia during that hospitalization, the patient was referred to our hospital for multidisciplinary treatment. We diagnosed her with SD after a detailed evaluation based on psychiatric examination and medical history.

We have determined leukopenia, anemia, and elevated LFT in the laboratory tests. We investigated the possible illnesses with the counseling of hematology. However, we could not find a pathology that may explain the current laboratory values. We evaluated leukopenia and anemia were induced by clozapine and continued with quetiapine. We initiated the treatment with paliperidone 3 mg/day due to a different chemical structure from clozapine. We also added lithium carbonate 600 mg/day as a mood stabilizer and leukocytosis-inducing effect. However, paliperidone was discontinued after disturbance in CBC and olanzapine 5 mg/day was added to the treatment. She was discharged after her delusions and homicidal behavior tail off.

We were informed about the dose of olanzapine was increased to 15 mg/day in the outpatient clinic control. She admitted to our emergency service with similar complaints and neutropenia was determined again. We associated this disturbance with the olanzapine dosage and stopped it. Sulpiride was added to the treatment due to rare hematological side effects. However, ziprasidone was switched due to insufficient response. Since extrapyramidal system side effects developed, ziprasidone could not be continued. Paliperidone was started again since it provided partial remission in symptoms previously. However, leukopenia and neutropenia developed. We decided to observe patient's laboratory tests and most of the CBC values were increased except PLT after one week. We also performed tests to exclude autoimmune diseases that have a possible relationship with the fluctuations in the neutrophil count. However, we couldn't find any pathology. She was discharged after clinical improvement. Informed content was obtained.

**DISCUSSION:** Although clozapine is the riskiest antipsychotic in terms of leukopenia and neutropenia these side effects may develop with many antipsychotics as seen in our case. Antipsychotics are considered a group of drugs that may cause a tendency to cytopenia depending on individual factors, and it is thought that it would be beneficial to use them carefully in patients with a history of cytopenia.

**Keywords:** Clozapine, Neutropenia, Schizoaffective Disorder

## LATE-ONSET DELIRIUM TREMENS: A CASE REPORT

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**OBJECTIVE:** Delirium tremens (DT) is an acute confusional state due to alcohol withdrawal, and benzodiazepines are used in treatment. We present this case to emphasize the importance of using adequate doses of benzodiazepines in an alcohol withdrawal syndrome. The patient's informed consent has been obtained.

**CASE:** C.T. is a 58-year-old man, admitted to the alcohol and substance use disorders outpatient clinic in Erenköy Mental Health and Neurological Diseases Training and Research Hospital with 40 years of alcohol consumption history. His alcohol consumption had recently progressed to daily frequency. It was his first attempt at getting treatment and he stated that he stopped drinking 10 days ago. He had no history of other medical diseases. At first examination, ataxia was observed, no other withdrawal symptoms were detected. Liver function tests, complete blood count, and electrolytes were normal. Oral 30 mg/day diazepam treatment was commenced and the dose tapered within one week. Folate, multivitamins were also added to the treatment. After diazepam treatment was ceased, ataxia regressed, but there were complaints of sleep disturbance and anhedonia. Still, he showed no other withdrawal symptoms. Quetiapine 50 mg/day and sertraline 50 mg/day were added to treatment. He was admitted to the emergency department 22 days after stopping alcohol use with visual hallucinations, disorientation, and paranoid delusions. The family stated that he did not use alcohol since applying for treatment and urine toxicology for ethyl-glucuronide was also negative. A brain computed tomography (CT) scan was performed and neurological evaluation was made, any acute neurological pathology was not detected. Since DT usually develops in earlier days of alcohol abstinence, other pathologies that could lead to delirium presentation were considered to be more likely to occur. Therefore he was transferred to the general hospital but there was no evidence of any other medical pathologies. Then he was admitted to our inpatient clinic. Oral 50 mg/day diazepam, intravenous saline/dextrose solution, and 400 mg thiamine were ordered with the follow-up of symptoms. On the fifth day of hospitalization, the patient's delirium tremens finally resolved with an intact orientation to time, place, and person and psychotic symptoms disappeared. Diazepam doses were tapered then stopped and parenteral thiamine was continued with oral thiamine treatment.

**DISCUSSION:** Since alcohol is a central nervous system depressant, its withdrawal results in overactivity in the brain and could lead to the most severe, fatal alcohol withdrawal syndrome: Delirium Tremens. DT usually develops 48–72 hours after the cessation of heavy drinking and resolves within one week. Although in this case, the patient presented with DT on the 22nd day of his alcohol abstinence. Protracted and late-onset DT have been associated with complex comorbidities, benzodiazepine treatment regime, and heavy consumption of alcohol. Since there wasn't any alcohol consumption in that period and comorbidities, the late-onset was considered to be the outcome of the treatment with inadequate doses of benzodiazepine. Even though there have been side effects, benzodiazepines are the key components of the treatment of alcohol withdrawal syndrome.

**Keywords:** delirium tremens, DT, benzodiazepines, late-onset delirium tremens, alcohol withdrawal syndrome

## KLEINE-LEVIN SYNDROME AND COMORBID OBSESSIVE-COMPULSIVE DISORDER: A CASE REPORT

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**OBJECTIVE:** Obsessive-compulsive disorder (OCD) is a disorder in which people have recurring, unwanted thoughts, ideas or sensations (obsessions) that make them feel driven to do something repetitively (compulsions). Kleine-Levin syndrome (KLS) is a rare neuro-psychiatric disorder that mainly affects young men, mainly characterized by intermittent hypersomnia, behavioral and cognitive disorders, hyperphagia and hypersexuality. Each attack is seen for a period ranging from one week to 1-2 months, the attacks begin and end abruptly, and the affected individuals are asymptomatic between attacks. Hypersomnia is observed in all patients during attacks, the most common symptoms are cognitive disorders (abnormal speech, confusion, amnesia, hallucinations, delusions), hyperphagia, hypersexuality, irritability and mood changes. In this case, we discussed a patient with comorbid KLS and OCD from whose consent was obtained that the data could be used for scientific purposes including this presentation.

**CASE:** 24-year-old male patient, single, vocational school graduate, works as a sales manager in a store. The patient, who applied to us for an army roll-up examination, had sleeping attacks 1-2 times a year for about eight years, sleeping all day except for eating and meeting the toilet needs during the attacks, fatigue and weakness that started before the attack, increased fear, anger and aggression during the attack periods. He also had complaints such as emotional instability and increased sexual desire during the attacks. It was understood that the patient was diagnosed with "Periodic Hypersomnia" as a result of the examination of the epicrisis and polysomnography report of his hospitalization in another hospital. The patient was admitted to the psychiatry service for the purpose of making a decision about his military service eligibility and for close observation. The patient, who did not have any complaints on his application, had his last attack 6 months ago. No pathology was found in the physical and neurological examination performed during his admission. In the interviews, it was understood that; the patient didn't have a prior psychiatric treatment history and starting from the adolescence period of his life, he started taking shower and ghusl for 2-3 hours straight, he was not able to leave the house for a long time due to checking all the sockets, stove, and windows repeatedly which resulted in restlessness and the feeling of something bad might happen if he does not do all of these rituals. The symptoms were evaluated as obsessive-compulsive symptoms and the patient was diagnosed with OCD according to the DSM-5 diagnostic criteria. The patient, whose YBOCS score was found to be 25, was started on fluoxetine 20 mg/day and was discharged for outpatient follow-up.

**DISCUSSION:** KLS is interesting because it is a rare neuro-psychiatric syndrome. Although it has well-defined clinical features, it has not yet been clarified in terms of etiology. Although there are reports of treatment trials with lithium, modafinil, valproate, SSRIs in the literature, there is no effective treatment yet. Cases with OCD and KLS comorbidities have been reported in the literature. Studies on KLS are needed to shed light on the etiology of this disease and comorbid pathologies.

**Keywords:** Obsessive-Compulsive Disorder, Kleine-Levin Syndrome, KLS, OCD

## FOREIGN ACCENT SYNDROME (FAS): AS A RESULT OF NEUROLOGIC OR NON-NEUROLOGIC IMPAIRMENT

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**OBJECTIVE:** Foreign Accent Syndrome (FAS) is a rare speech production disorder in which a patient's pronunciation is regarded as foreign by speakers of the same speech community. Focal brain damage to the precentral gyrus of the language dominant hemisphere by trauma or stroke may cause this syndrome. Psychogenic FAS could occur as a result of underlying psychological issues. It is also referred non-organic, functional, or psychosomatic FAS. According to DSM-5, two female patients diagnosed with depression and conversion disorder are presented in this case report. Both started to speak with aphasia and mutism, progress with different accents after the stressor whose native language was Turkish. Consent was obtained from the patient.

### CASE

**Case-1:** A 44-year-old female patient has applied to our clinic with mutism, anhedonia, avolition, insomnia, decreased appetite, bilateral ptosis, and speaking with Russian, Kurdish, Azerbaijani accents, which were not known by her before. The patient reported that anhedonia, avolition, intermittent bilateral ptosis complaints continued for three years, but mutism and speaking with different accents started two years ago. These two complaints began after a stressor which was a humiliation by the supervisor at work, and she could not respond. The patient was admitted to the neurology clinic after these symptoms occurred. MRG, EMG, blood tests, and vasculitis tests were normal. Myasthenia Gravis were excluded because of not responding to pyridostigmine. After all the organic pathological causes were excluded, the patient consulted a psychiatry clinic. We diagnosed depression and conversion disorder and Sertraline 200mg/day treatment was started on the patient, and complaints began to reduce.

**Case-2:** The patient is a 34-year-old woman, widowed, and lives with her ex-father-in-law, mother-in-law, and children. The patient was first admitted to our neurology clinic four years ago with the complaint of fainting, right deviation of the mandible, and parasuicidal behavior when marriage was organized with her brother-in-law on her behalf. No abnormality was detected in the patient's MRI, EEG, EMG, blood tests, neurological and temporomandibular joint examination. The patient diagnosed with conversion disorder and took different antidepressants. After the intense stress such as loss of property because of her brother-in-law's debt, the symptoms of aphasia, dysphasia and speaking with Russian and Kurdish accents started. Neurology consultation was requested, neurological examination, blood tests, scanning test was repeated and no organic pathology was found. The most remarkable examination sign was la belle indifference in her affect while speaking. We diagnosed conversion disorder and Escitalopram 10 mg/day treatment was started on the patient, and complaints began to reduce.

**DISCUSSION:** Psychogenic FAS is related to a psychiatric or psychological disturbance without demonstrable neurological damage or an organic condition that might explain the accent. Psychogenic FAS occurs more in women than men. In a study of 105 cases, 15 cases, 3 of whom were diagnosed with conversion disorder, were followed up with psychogenic FAS. The remarkable situation in all psychogenic FAS is that the shift in accent was never the "first" conversion symptom. The other neurological conversion symptoms occurred before the shift in accent presented like the literature.

**Keywords:** foreign accent syndrome, psychogenic, conversion disorder, non-organic

## SUCCESSFUL TREATMENT OF DELUSIONAL DISORDER WITH RISPERIDONE: A CASE REPORT

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**OBJECTIVE:** Delusional disorder is characterized with the presence of one or more delusions for a month or longer. Apart from the impact of the delusion or its ramifications, functioning is not markedly impaired, and behavior is not obviously bizarre or odd. The treatment mainly includes antipsychotics, however response rates are between 32.3%-52.6%. We present a patient who had delusions for ten years, responding well to risperidone treatment.

**CASE:** A 58 years old female patient was admitted to our outpatient clinic with paranoid delusions. Ten years ago, she started to tell that the mafia was following and monitoring her. In time, delusions of reference began; about the mafia sending her messages by television or signboards. She also had migratory muscle twitching for one year. The patient had no prior psychiatric admission. Except hypertension and type 2 diabetes comorbidities, she had no significant medical history. She also denied smoking or any drug use. Her brother had schizophrenia, and died by suicide. Blood tests showed no abnormalities. The EMG test was unremarkable.

At the admission, her mood was anxious. She had referential and persecutory delusions without perceptual disturbance. She had no insight. Other findings were unremarkable. Functionality was preserved. Delusional disorder criteria was met, thus risperidone 2 mg/day was started.

After one month, her delusions abated significantly. Risperidone was planned to be increased to 4 mg/day but she couldn't tolerate due to sedation. In three months, with 2 mg/day dosage, her delusions completely disappeared; yet depressive mood, anhedonia and anergia emerged.

Depressive symptoms were secondary to antipsychotic medication since they started after antipsychotic initiation with no other apparent cause. Escitalopram 10 mg/day was added.

One month later, the patient had partial improvement, so escitalopram was increased to 20 mg/day. After 1 month; her depressive mood and anergia abated, however anhedonia persisted. Risperidone was decreased to 1 mg/day. Then, the patient stopped visiting our clinic, and continued the same treatment. After 1 year, she showed up with no depressive or psychotic symptoms, only sedation. Risperidone was stopped and escitalopram 20 mg/day was continued. During follow-up, her psychotic symptoms did not reemerge while abstaining from antipsychotics for 2 years.

**DISCUSSION:** We presented a delusional disorder case successfully recovered with risperidone in 4 months. Even after 2 years of antipsychotic discontinuation, psychosis didn't re-occur. In one study it was found that mean duration of illness at the time of first contact was  $44.15 \pm 66.66$  months; therefore it can be concluded that risperidone could be an effective choice against delusional disorder and patients may recover by temporarily using an antipsychotic. It was shown that long-acting injections increase the likelihood of response, however oral treatment can be suitable for medicine-adherent patients.

**Keywords:** delusional disorder, psychotic symptoms, risperidone

## COEXISTENCE OF CEREBRAL PALSY AND JUVENILE ONSET BIPOLAR DISORDER

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**OBJECTIVE:** Diagnosing psychopathology could be challenging in cases of comorbid neurological disorders in childhood and adolescence. In this case series, which consists of two adolescents with bipolar disorder and cerebral palsy, it is aimed to shed light on diagnosis, treatment and follow-up in the presence of comorbid conditions.

### CASE

**Case 1:** 13 year old male patient with cerebral palsy, right hemiparesis and mental retardation. Patient was started to follow-up regularly with risperidone 0.5 mg per day in the child and adolescent psychiatry department from the age of 2 due to hyperactivity, self-harm behavior and irritability. In the following years, running away from home and physically harming behavior to his friends were added to his complaints. At the age of 11, patient's treatment was adjusted to risperidone 1.5 mg due to dysphoric mood, persecutory delusion, increase of irritability and aggression. Because of patient's desorganized behavior like touching his father's genitals and thoughts of harming his cousin, risperidone treatment was increased to 2 mg. In January 2022, due to decreased amount of sleep, attacking family members, auditory hallucinations, persecutory delusions, running away from home, significant increase in sexual behavior and irritability, he was admitted to our inpatient unit with diagnosis of bipolar disorder. The patient was discharged with partial recovery with treatment of valproic acid 750 and risperidone 2 mg per day.

**Case 2:** 13 year old male patient. He was diagnosed with cerebral palsy and epilepsy at 3 years old. Patient's complaints like grandiosity, insomnia, increased energy, and hyperactivity started in January 2021 after oxcarbazepine was stopped. When he applied to child psychiatry department with this symptoms, risperidone 1 mg per day was started. While his manic symptoms were decreasing, depressive complaints started in this period. He had his second manic episode in July 2021 in a 5 day period in the form of insomnia, restlessness and visual hallucinations. Therefore, olanzapine 10 mg was added to his treatment and risperidone was increased to 2mg. Mood swings continued in follow-up period. In August 2021, he was admitted to our inpatient unit with the diagnosis of bipolar disorder with complaints of insomnia, hyperactivity, self-talk, meaningless crying and laughing, visual hallucinations. The patient was discharged with near complete recovery with treatment of valproic acid 750 mg and risperidone 2 mg per day. No recurrent episodes were observed in controls. Life chart of both patients and detailed medication history is summarized below. Informed consent was taken from both patients parents.

**DISCUSSION:** In the literature there are many studies suggested that psychopathology incidence increase in patients with cerebral palsy. However, studies showing bipolar disorder comorbidity are limited. When the presented cases and the literature are evaluated together, the diagnosis processes may be delayed in the presence of neurological comorbid conditions. In case of diagnostic complexity, it is important for the clinician to make a detailed evaluation. It is thought that this case series may contribute to the limited literature.

**Keywords:** adolescent, bipolar disorder, cerebral palsy

## A CASE REPORT: STEROID-INDUCED CATATONIA DURING THE TREATMENT OF PRIMARY ADRENAL INSUFFICIENCY

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**OBJECTIVE:** Catatonia is an underdiagnosed neuropsychiatric condition that could present with different physical findings ranging from inactivity to excessive physical activity. Although catatonia is often thought to be associated with various mental illness disorders, it can also occur as a result of other medical conditions. In this specific case, we aimed to discuss a patient who was diagnosed with catatonia while under treatment for primary adrenal insufficiency.

**CASE:** The patient was a 26-year-old single woman with no past psychiatric history. She initially presented to the hospital with nausea, vomiting and fatigue 2 days ago. After administration of methylprednisolone and dexamethasone, she was referred to the emergency department of our hospital for further examination and treatment. She was hospitalized with the diagnosis of primary adrenal insufficiency in the inpatient clinic of endocrinology on the same day. Upon completion of the medical evaluation, she began a programme of 300 mg of hydrocortisone infusion therapy. After 2 days of hospitalization she began to display restlessness, agitation, lack of sleep, delusions of reference and visual hallucinations. Psychiatry was consulted. She was then followed by psychiatry through regular consultations. A proper psychiatric interview could not be conducted with the patient on the 2nd day of hospitalization since she could not cooperate with the interviewer. The patient was swearing and shouting. We learned from the relatives of the patient that she had no psychiatric complaints in the past, did not use any psychotropic drugs. She only had a history of Hashimoto's thyroiditis. She did not have a family history of psychiatric disorders and wasn't using cigarettes or alcohol. The brain computed tomography revealed no significant finding. She was on the 3rd day of steroid treatment. We utilized haloperidol with an initial diagnosis of steroid-related psychosis. On the 7th day of hospitalization and steroid treatment, the symptoms of primary adrenal insufficiency, visual hallucinations, and agitation were relieved. Her insight and judgement improved. However, mutism, posturing, mannerism, negativism, refusal to eat and waxy flexibility were added to clinical status. With the diagnosis of catatonia, antipsychotic treatment was discontinued. Oral lorazepam introduced. On the 3rd day of lorazepam treatment, her catatonia was obviously improved, except wax flexibility. Affective blunting and psychomotor retardation continued for several days. After the catatonia disappeared completely on the 6th day of lorazepam treatment, it was planned to discontinue lorazepam gradually within one week. No psychiatric symptoms or signs were detected in the 1st week and 1st month after discharge. Informed consent was obtained from the patient and her relatives.

**DISCUSSION:** The patient didn't meet the diagnostic criteria for the neuroleptic malignant syndrome. Catatonic disorder due to another medical condition (primary adrenal insufficiency), catatonia associated with another mental disorder (steroid-induced psychosis), and drug-induced catatonia (steroid-induced catatonia) were among our differential diagnoses. According to past history, primary adrenal insufficiency persisted for 2 months. However, symptoms of catatonia appeared after steroid administration. Although psychotic symptoms responded well to haloperidol treatment, catatonia developed. That's why we considered drug-induced catatonia.

**Keywords:** catatonia, steroid, psychosis, primary adrenal insufficiency

## MANIC ATTACK AFTER DISCONTINUATION OF VENLAFAXINE: A CASE REPORT

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**OBJECTIVE:** Antidepressant-induced mania and antidepressant discontinuation syndrome are well known. Mirin et al. described 1 bipolar and 6 unipolar patients who developed manic symptoms after discontinuation of tricyclic antidepressants (TCA) and were the first to document this phenomenon. The paradoxical manic switch has also been reported after discontinuation of selective serotonin reuptake inhibitors (SSRIs), monoamine oxidase inhibitors (MAOIs) and serotonin norepinephrine reuptake inhibitors (SNRIs). Here, we present a case with a history of manic episode after discontinuation of venlafaxine. Consent was obtained from the patient.

**CASE:** A 42-year-old male patient with bipolar I disorder, applied to outpatient clinics of Department of Psychiatry at Adnan Menderes University with sadness, anhedonia, and suicidal thoughts. In the laboratory examination of the patient, no obvious pathology was detected except hyperlipidaemia. Life-chart of our patient showed that he had a total of 5 manic and 7 depressive episodes. It was observed that depressive episodes generally occurred after discontinuation of antidepressant and mood stabilizer drugs; however, according to the anamnesis and prescription registry taken from the patient, it was determined that the first manic episode of the patient occurred after abrupt cessation of the 450 mg venlafaxine while he was euthymic. The current depressive episode was treated with valproic acid 2000 mg/day, quetiapine 100 mg/day and citalopram 20mg/day. The patient and his relatives were informed in detail about drug compliance.

**DISCUSSION:** Clinicians should be aware that discontinuation of antidepressants can lead to mania and hypomania. The studies between 1981 and 2014 indicated that 27 patients developed paradoxical mania or hypomania following discontinuation of antidepressants, mostly with TCAs. Also in half of the cases, the antidepressant medication was discontinued abruptly. However, there are many potential confounders in this era. For example, drug-independent manic episode, manic states due to the initiation of antidepressants rather than discontinuation, dose reduction of other drugs (e.g., mood stabilizers), misdiagnosis of hypomania/mania (e.g., agitated depression, akathisia) can be given. In the literature, Narayan and Haddad suggested antidepressant withdrawal mania criteria to minimize these confounders. They recommended that “there should not be pharmacological confounders that could explain the manic state, antidepressant treatment should be used at least four weeks and should be taken regularly, manic symptoms should begin within one week after discontinuation or dose reduction of the antidepressant”. The neurobiological basis of antidepressant withdrawal symptoms is unclear. A transient serotonin deficiency in down-regulated serotonin receptors, and increased cholinergic and monoaminergic activity could be possible explanatory mechanisms. Chronic cerebral ischemia especially in frontolimbic network may be an additional risk factor. If a patient develops a manic state within one week after cessation of antidepressants, then a diagnosis of discontinuation syndrome should be considered. The discontinuation syndrome might be related to the duration, dose and elimination rate of medication. More research is needed to determine the prevalence of the antidepressant discontinuation induced mania and risk factors of this phenomenon.

**Keywords:** antidepressant, discontinuation, hypomania, mania, withdrawal, venlafaxine

## THE POSSIBLE EFFECTS OF BOSWELLIA SERRATA ABOUT BIPOLAR DISORDER WITH MANIC EPISODE

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**OBJECTIVE:** Potential antidepressant effects of “Boswellia Serrata” plant named as “Akgünlük” among the public in Turkish and examining the possible consequences of these effects in Bipolar Disorder patients.

**CASE:** A 57-year-old female patient was previously diagnosed with Bipolar Disorder about 5 years ago. She was hospitalized once in 1989, there is no information about that hospitalization. She has not been hospitalized since she was diagnosed with Bipolar Disorder. She was being followed up by a psychiatrist who has his own clinic. She has been using Lithium irregularly and Quetiapine regularly for 5 years. Depressive and hypomanic episodes have been described from time to time for the last 5 years. Full remission between episodes is described. She had started drinking Akgünlük tea for her Osteoarthritis and had stopped using Lithium to avoid drug interaction, 2 weeks before she was admitted to us. She applied to us with manic symptomatology characterized by complaints of irritability, increase in speed and amount of speech, switching from one sentence to another, thinking that her husband is jealous of her because of her friends are at higher stage rather than his friends, decreased need for sleep, increased spending of money, the believes including others talk about her, grandiosity and decreased appetite for the last one week. Consent was obtained from the patient for poster presentation

**DISCUSSION:** The patient, who started using the Boswellia Serrata plant(which is thought to have potential antidepressant and anxiolytic effects in experiments on mice) and stopped using lithium, had a manic episode. The patient, who has not been hospitalized since the diagnosis, did not take lithium regularly and did not have an episode that required hospitalization. The patient, who recently stopped using lithium and started using the tea of this plant, entered a manic episode that required hospitalization. The reason of the initiation of this episode might be either quitting Lithium treatment or the potential anti-depressant effect of the herb, or both. The further investigation of the effects of this plant might be presented to the scientific literature in more detail in future studies.

**Keywords:** Antidepressant, Bipolar, Boswellia

## DETERMINING VALIDITY AND RELIABILITY OF TURKISH VERSION OF THE BELIEFS ABOUT PARANOIA SCALE SHORT FORM (BAPS-SF) AND THE MEASURE OF COMMON RESPONSES TO UNUSUAL EXPERIENCES (MCR)

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**OBJECTIVE:** The aim of the study was to determine the validity and reliability of Turkish version of The Beliefs about Paranoia Scale Short Form (BaPS-SF) and The Measure of Common Responses to Unusual Experiences (MCR). These assessment scales help identify both beliefs about paranoia and ways of coping with unusual experiences.

**METHODS:** One hundred and five patients diagnosed with schizophrenia, schizoaffective disorder and bipolar disorder with psychotic features with psychotic signs and symptoms and 80 healthy controls without any psychiatric diagnosis in the past or at the time of evaluation were included in the study. Patients were evaluated with the Positive and Negative Symptom Scale, the Bipolar Depression Rating Scale, the Young Mania Rating Scale, the Hamilton Anxiety Rating Scale and the Cognitive Attention Syndrome 1 Scale (CAS-1), in addition to the BaPS-SF and MCR. Informed consent and permission from the ethics committee were obtained from the participants in the study. Ethical approval was obtained from Tokat Gaziosmanpaşa University School of Medicine Ethics Committee Date: 18.02.2021 Number: 719). Study data were analyzed with SPSS v22.

**RESULTS:** The age of the patients was 38.40 (11.94) years, and the control group was 37.11 (12.51) years. The groups were similar in terms of age, gender and education level. Married people were more common in the healthy control group ( $p=0.005$ ). All psychopathology scales were significantly higher in the psychosis group (all  $p$  values  $<0.001$ ). CAS-1 strategies subscale ( $p=0.006$ ) and total ( $p=0.016$ ) scores were significantly higher in the psychosis group. The internal consistency of the BaPS-SF was high (Cronbach's  $\alpha=0.898$ ). The internal consistency of the subscales ranged from 0.867 to 0.876. It was determined that the MCR had a three-factor structure: social control and reassurance seeking, threat monitoring and avoidance, and conscious self-regulation attempts. The internal consistency of the MCR was also high (Cronbach's  $\alpha=0.820$ ). These values for the subscales ranged from 0.681 to 0.811. Deletion of no items increased the internal consistency of the scales (except for the first item of the MCR). All items of the scales had a correlation coefficient greater than 0.300 with the whole scale (except for the first item of the MCR). Subscales of the BaPS-SF and MCR (except for the BaPS-SF negative beliefs and CAS-1 positive beliefs, and MCR social control and reassurance seeking and CAS-1 negative beliefs) correlated positively and significantly with the subscales of the CAS-1 (correlation coefficients  $r=0.16-0.60$ , all  $p$  values  $<0.05$ ).

**CONCLUSIONS:** Internal consistency of the original BaPS-SF was found to be similar (Cronbach's  $\alpha=0.89$ ) in the Turkish version. The original BaPS-SF also consisted of the same three factors extracted in the Turkish version. The internal consistency of these factors ranged from 0.89 to 0.93. A three-factor structure was also found in the original MCR. The internal consistency for its subscales was between 0.712 and 0.746, which was similarly reported in the Turkish version. The Turkish versions of the scales successfully differentiated patients from the healthy controls. Therefore, current results showed that BaPS-SF and MCR were valid and reliable for the Turkish population.

**Keywords:** metacognition, scale, validity, reliability

## SOCIODEMOGRAPHIC AND CLINICAL CHARACTERISTICS, CORRELATION WITH BODY MASS INDEX OF BARIATRIC SURGERY CANDIDATES IN A UNIVERSITY HOSPITAL

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**OBJECTIVE:** Obesity is a serious public health problem associated with increased morbidity and mortality and decreased quality of life. Abnormal eating behaviors, mental illnesses such as anxiety and depression, problems with impulsivity are higher among bariatric surgery candidates. The aim of this study is to evaluate the sociodemographic and clinical characteristics of bariatric surgery candidates who applied for the bariatric surgery board in a university hospital.

**METHODS:** In this retrospective study, patients who applied for bariatric surgery and were evaluated by the Bariatric Surgery Board of Hacettepe University Hospitals between 2013-2020 were included. Sociodemographic and clinical characteristics as well as pathological eating characteristics and psychological characteristics including stress intolerance and impulsivity were examined using relevant scales (Bulimia Investigatory Test, Edinburgh (BITE), Eating Attitudes Test (EAT), Dutch Eating Behavior Questionnaire (DEBQ), Brief Symptom Inventory (BSI), Distress Intolerance Index (DII) The UPPS Impulsive Behavior Scale (UPPS)). Institutional review and approval from the Ethics Committee of Hacettepe University were obtained (GO 20-660,2020/ 14-20).

**RESULTS:** A total of 465 bariatric surgery candidates, 77.4% ( $n= 360$ ) female and 22.6% ( $n= 105$ ) male, were included in the study. A total of 71.6% of the sample had at least a high school level of education. The majority was married ( $n= 284$ , 61.1%), 25.2% single, 9.3% was either widowed or divorced. The mean age of the participants was 37.78 ( $\pm 10.41$ , 18- 67), mean BMI of the sample was 47.06 kg/m<sup>2</sup> ( $\pm 6.41$ , 35.00- 79.86). Eighteen (3.9%) of the bariatric candidates had a BMI value of 35- 39.99 kg/m<sup>2</sup>, 316 (68%) of them had a BMI value of 40.00- 49.99 kg/m<sup>2</sup>, 113 persons (24.3%) had a BMI value of 50.00- 59.99, and 18 (3.9%) had a BMI value of 60.00 and above. A total of 92 persons (23.1%) were found to have scores of 30 and above from EAT, which indicates abnormal eating behavior. The mean EAT total score was 23.03  $\pm$  11.23, mean BITE score was 14.82  $\pm$  5.66. When the BMI correlation to scales' total and sub-scale scores (BSI, EAT, BITE, DII) was examined, there was no significant correlation between these except DEBQ Restricting Subscale scores ( $r= -0.139$ ,  $p=0.005$ ).

**CONCLUSION:** Majority of the patients were women and had at least high school education. Almost two thirds of the sample had BMI values between 40- 49.99 kg/m<sup>2</sup>. A substantial portion of the sample has been found to have pathological eating behaviors. However no significant associations were found between BMI and eating scale scores except DEBQ Restrictive Sub-scale, this result was probably due to the homogenous nature of the sample regarding BMI values. A comparison between bariatric candidates and obese patients applying for conventional treatment methods may give more revealing results about eating pathologies in obese patients, comparison of these groups is recommended in the future studies.

**Keywords:** obesity, bariatric candidate, eating behavior, depression, stress intolerance, impulsivity

## COMPLICATED GRIEF DISORDER WITH PSYCHOSIS AS A POSSIBLE DEFENSE MECHANISM: HOW IMPORTANT IS DURATION?

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**BACKGROUND AND AIM:** Grief is an experience in which the longing for the loss and feelings of emptiness are at the forefront after the loss of a loved one, and depressive symptoms are seen in the person, but these are expected to decrease in the process. The condition called Persistent Complex Bereavement Disorder (PCBD) in DSM-V is intense grief that lasts longer than expected according to social norms after the loss, causes impairment in functionality, prevents people from understanding death and continuing their lives, and that must continue for at least 12 months in adults. PCBD is included in the DSM-V under conditions that require further studies.

Risk factors for PCBD; being a woman, cultural reasons, the relationship of the person with the loss, the life period of the person and traumatic losses. In this case, a case of 'complicated grief' who applied to our emergency outpatient clinic and lost three first-degree relatives within a year is presented. Consent was obtained from the patient.

**METHODS:** A 44-year-old female, divorced patient with two children aged 17 and 13 has applied with sadness, decrease in occupational functioning, sleeplessness, anhedonia, constantly thinking about her loss, feeling guilty about it, suicidal thoughts and hopelessness about her mental health which began after her brother's traumatic loss who were diagnosed with schizophrenia six months ago. Additionally, she was feeling different emotions for the last fifteen days, such as a decrease in the feeling of pain, feeling robotic and empty, and fear of harming herself. She explained her situation; "My technological pursuits have increased for fifteen days. My phone is tapping, someone is following me. It's unsettling, but it helps me to clear my mind. It prevents me from suffering because of feeling like a robot."

**RESULTS:** A year ago, the patient lost his mother and father one month apart due to COVID-19 infection, and six months later, she lost her older brother, with whom he lived and cared, two weeks after the COVID-19 infection.

Risperidon 1 mg/day was started and Duloxetine was increased from 60 mg/day to 90 mg/day. MMPI and Rorschach tests and routine blood tests for her medical conditions was performed. Normal grief, depression with psychotic features, psychotic disorder, PTSD and complicated grief was evaluated in terms of differential diagnosis. The patient's symptoms decreased with pharmacotherapy and regular psychotherapy sessions.

**CONCLUSIONS:** The signs of grief experienced by people are similar to their fingerprints. The symptoms like closeness of the loss, social isolation, disability, feelings of emptiness, thoughts of guilt about the loss and longing for it and avoiding reminders are related to complicated grief. Moreover, psychotic symptoms such as persecutory delusions may be a defense mechanism for coping with grief.

In addition, since individuals experiencing complicated grief may experience the somatic and psychiatric symptoms of their loss, the psychotic symptoms seen in the case can be explained by this mechanism.

In this case, the 12-month time limit in PCBD defined in DSM-V may be insufficient. More extensive research is needed for diagnostic systems to be developing in the future.

**Keywords:** Complicated grief, psychosis, depression

## THREE CASE REPORTS THAT WERE DEFERRED TO UNDERGO BARIATRIC SURGERY AFTER PSYCHIATRIC EVALUATION

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**OBJECTIVE:** In this case report, it is aimed to emphasize the conditions that needs attention in the care of patients before the operation.

**CASE: 1:** 47 years old female, according to her history, it was understood that the patient wanted to have bariatric surgery about two weeks ago and therefore applied to general surgery. She was referred by the general surgery department to evaluate the psychiatric suitability for bariatric surgery. The patient previously diagnosed with bipolar disorder and treated on lithium 1200 mg/g, has complaints of increased amount of speech and tone of voice, inability to sleep, feeling energetic, increased self-confidence, irritability, and restlessness for 15 days. Lithium was gradually decreased to 900 mg/g and quetiapine XR 100 mg/g was added to her treatment. It was recommended that the decision of bariatric surgery should be re-evaluated after the patient's acute mania period is over.

**CASE2:** 45 years old female, referred by the general surgery department to evaluate the psychiatric suitability for bariatric surgery. The patient has complaints of overeating. She has binge eating periods that she could not stop, almost every day and then she regrets having eaten too much. The patient was diagnosed with binge eating disorder. Sleep hygiene and regular eating behaviors were explained to the patient. She was recommended to reduce paroxetine slowly and switch to fluoxetine, discontinue amitriptyline and start aripiprazole 2.5 mg, and be re-evaluated for bariatric surgery after close follow-up.

**CASE3:** 48 years old female patient who was referred for bariatric surgery, had used antidepressant medication in the past with complaints of nervousness and weakness. Two weeks ago, fluoxetine 20 mg was recommended for similar complaints in a psychiatry clinic. When the eating habits and behavior of the patient were evaluated, it was learned that she had binge eating periods once or twice a week for the past year, where the number of periods increase when she feels down. She also has difficulty in stopping herself during these attacks, eats much faster and a larger amount of food compared to usual. In addition, neurodevelopmental history and present examination revealed attention deficit, impulsivity, and hyperactivity symptoms. A follow-up with a diagnosis of binge-eating disorder and a preliminary diagnosis of ADHD was planned with the patient. The patient's treatment for binge eating disorder was started, and it was concluded that the operation was not appropriate before she went into remission. Fluoxetine was increased to 40 mg. Aripiprazole 2.5 mg was added to the treatment and it was thought that methylphenidate could be added in the follow-up sequence of the patient.

Permission of all patients are obtained for using their data on this case report.

**DISCUSSION:** The most common diagnoses in psychiatric evaluation before bariatric surgery are mood disorders, anxiety disorders, eating disorders and other diseases. Clinical studies on the course of the disease in patients with psychiatric disorders after bariatric surgery, and the effect of psychiatric disease on post-surgical morbidity and mortality being insufficient, more studies and detailed evaluation of patients are required to reach a consensus among the disciplines.

**Keywords:** bariatric surgery, binge eating disorders, consultation, manic episode

## MANIA WITH PSYCHOTIC FEATURE MANIFESTED DURING TREATMENT FOR HYPONATREMIA: A CASE REPORT

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**OBJECTIVE:** Hyponatremia can present with various mental and psychiatric symptoms. Mania is a rare psychiatric situation in hyponatremia course. We demonstrate a case developed mania during treatment for hyponatremia in internal medicine clinic.

**CASE:** 30-year-old male patient was hospitalized to internal medicine service due to hyponatremia after vomiting, intense diarrhea and weakness for the last 15 days. Patient was consulted to psychiatry for psychomotor agitation, non-compliance with treatment and increase in speech. In his psychiatric examination; his sociability was defensive. He was irritable, conscious, oriented and cooperative. His attention can be diverted, the amount of speech was increased, speech was pressurized and difficult to reach a goal. He had visual hallucination. There were grandiose, bizarre delusions in the content of ideas. Both patient and his family didn't report any alcohol, substance or cigarette use. His family defined an introverted and immature personality about him. Manic history was not described. He had been treated with Fluoxetine 20mg/day for two years and drug free for 3 years.

Hyponatremia was recorrected so he transferred to psychiatry clinic. He got 29 points from Young Mania Rating Scale. No substance was determined in urine tests. He treated with olanzapine 10mg/day. 5th day of olanzapin treatment, the amount of speech was decreased, his associations were regular, hallucinations were not described, and there was no delusions, his mood was mildly anxious. His orientation was maintained throughout the whole follow up. The score of Young Mania Rating Scale was found 10. He complained from urinary retention (UR) at same day. We evaluated as a side effect of olanzapine so olanzapine was decreased from 10 mg to 5 mg and immediate bladder decompression with a Foley catheter. The patient was discharged by signing the treatment rejection form at the request of his relatives on the 7th day of his hospitalization. Olanzapine was reduced to 2.5mg then discontinued because of UR. The patient's follow-up continues and has no complains. The patient's consent has been taken for this case report.

**DISCUSSION:** Manic symptoms secondary to hyponatremia are rare in the literature, but there are case reports available especially in elderly patients. Opposite of other cases in literature our patient was a young adult. Exclusion of delirium in differential diagnosis which may be seen in electrolyte disorders is very important like our case. He was conscious, oriented of all his hospitalization period (both in internal medicine and psychiatry clinic). Our patient was sensitive to the anticholinergic side-effects of antipsychotics but his psychiatric symptoms did not recur despite the obligatory dose reduction.

**Keywords:** hyponatremia, mania, urinary retention

## BIPOLAR AFFECTIVE DISORDER UNSPECIFIED TYPE, A CASE PRESENTATION

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**OBJECTIVE:** Bipolar Affective Disorder (BAD) is a condition with periods of mania, hypomania and depression. Mood fluctuations are common during the process of disorder. The first episode of BAD is generally depressive, and these episodes persist significantly longer than manic or hypomanic episodes throughout the course of illness. Patients diagnosed with unipolar depression should be asked whether they have had a period when they were overactive, more talkative, increased in goal-directed activity, and decreased need for sleep. We aimed to present a case that was treated for 4 years with the diagnosis of unipolar depressive disorder and then diagnosed as bipolar affective disorder (BAD) unspecified type. Informed consent was obtained from the patient for the case presentation.

**CASE:** The patient was a 46 year old male and married with his third wife and had no additional disease. According to his medical records; it was learned that he had been receiving antidepressant treatment for four years with the diagnosis of major depressive disorder (MDD) until he was admitted to our clinic. Despite the fact that the patient, who uses his medications regularly and goes to the outpatient clinic controls regularly, was hospitalized twice for four years, there was no adequate improvement in his symptoms and psychosocial functioning. The patient was referred to our clinic with the preliminary diagnosis of treatment-resistant MDD. When the patient is evaluated in detail; it was learned that he had signs and symptoms such as psychomotor agitation, decreased need for sleep, increased in appetite and irritability every year during seasonal changes. On the other hand, his signs and symptoms never fulfilled the diagnostic criteria of manic or hypomanic episode. Additionally, the patient's uncle and brother were found to be suffering from BAD Type 1. Hence, his diagnosis was established as bipolar affective disorder "unspecified type". The patient was treated with sertaline 100 mg/per day, mirtazapine 15 mg/per day, and aripiprazole 10 mg/per day before hospitalization. Considering the diagnosis of BAD unspecified type, bupropion 300 mg/per day, lithium 900 mg/per day, valproic acid 1000 mg/perday was administered to the patient. After the follow-up, it was observed that the patient's signs and symptoms decreased. Hamilton depression rating scale (HDRS) scores decreased from 29 to 7. Young Mania Rating Scale (YMRS) decreased from 4 to 2.

**DISCUSSION:** The concept of bipolar spectrum is used to define conditions between classic unipolar depression and BAD Type 1. Recurrent depressions, family history of bipolar or antidepressant-induced mania, with no response to antidepressant treatment, mixed and melancholic features, early onset of depression and more depressive episodes, inadequate response to antidepressants, hyperthymic and cyclothymic temperaments are features suggestive of bipolar spectrum. We think that our case highlight importance of diagnosis and treatment for BAD spectrum. The diagnosis and treatment approach as BAD spectrum were redefined due to the characteristics of our patient such as seasonal sleep rhythm and mood changes, unresponsiveness to antidepressant treatment, and the presence of a family history of bipolar mood disorder. Thus, positive results were obtained in the follow-up process of our case.

**Keywords:** bipolar affective disorder, depression, mood stabilizer

## RISPERIDONE INDUCED REVERSIBLE NEUTROPENIA

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**OBJECTIVE:** Drug-induced neutropenia (without chemotherapy) is a rare but potentially fatal condition. Affected patients usually experience severe neutropenia within several weeks to months after initial exposure to a drug, and mortality is ~5%. We report a case of leukopenia and neutropenia that occurred during treatment with risperidone and resolved after switching to amisulpride in a covid-positive patient. With this case report we aim to point out the risk of risperidone-induced neutropenia. Consent was obtained from the patient.

**CASE:** A 58-year-old, married, retired soldier was admitted to our psychiatric emergency department complaining of suspiciousness, social isolation, thoughts of being threatened via radio frequency waves for the first time. The patient had no history of substance use. He was diagnosed with benign prostatic hyperplasia. However, due to paranoid thoughts, he refused to take any type of medication. MRI (magnetic resonance imaging), EEG (electroencephalography), and blood tests were performed to establish a differential diagnosis. After ruling out other possible diagnoses, we decided to administer risperidone 4 mg/d with a diagnosis of other psychotic disorder not due to a substance or known physiological condition. After twelve days, the risperidone dose was increased to 6 mg/d. On the fourteenth day of risperidone therapy, the erythematous rashes appeared on the face. Blood pressure, pulse rate, respiratory rate, body temperature, and physical examination (except for the skin rashes) were normal. In blood test, wbc level dropped from 9,16 to 2,33.10<sup>3</sup>; neutrophils from 6,44 to 1,4.10<sup>3</sup>. Covid PCR test was performed, as well. Because of the positive PCR test, the departments of hematology and dermatology were consulted. Atopic dermatitis and drug-induced neutropenia were considered as preliminary diagnoses. Therefore, it was decided to switch risperidone to amisulpride. Neutrophilia values increased within 24 hours after discontinuation of risperidone.

**DISCUSSION:** Among antipsychotics, clozapine is known for its neutropenic effect. However, there are also published cases of riperidone-induced neutropenia. In our case, rashes and neutropenia occurred in association with the first-time use of risperidone. Also, the positivity of the Covid test complicated the differential diagnosis, because it is known that even Covid 19 infection can cause various hematologic conditions, and among them, lymphopenia is the most common clinical situation. However, the fact, that neutropenia with covid infection is usually presented in pediatric patient groups and that neutropenia was resolved in 24 hours after switching of antipsychotics, suggests that the reaction can be drug-induced neutropenia.

**Keywords:** drug reaction, neutropenia, risperidone

## WITHDRAWAL OR REBOUND? PRURITUS AFTER FLUOXETINE DISCONTINUATION

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**OBJECTIVE:** Selective serotonin reuptake inhibitors (SSRIs) have an important place in psychiatry clinical practice. SSRIs may cause withdrawal symptoms when stopped. In our case, we present a patient with pruritus that started immediately after fluoxetine treatment was stopped and continued for 3 months. Written and verbal informed consent was obtained from the patient.

**CASE:** A 41-year-old female patient was admitted to our clinic with the complaint of itching for 3 months, mostly affecting the upper extremities. In the psychiatric examination, the patient was conscious, cooperative, fully oriented, her affect was calm and her mood was euthymic. Beck's depression and anxiety scores were 7 and 6, respectively. According to Dsm-5, no diagnosis could be made. In the blood analysis, results were within normal limits. There was no history of medication or chronic disease. The patient reported no changes in toiletries, detergents, or diet. The patient was consulted by the dermatologist for her pruritus. No pathology was found to explain the dermatologically present picture. She was started on 10 mg of loratadine daily due to pruritus. She reported no change in pruritus after 3 weeks of use. She denied experiencing any other possible withdrawal effects. Pruritus started 2 days after the fluoxetine medication was discontinued and affected the whole body, mostly in the upper extremities. 8 months ago, the patient applied to our outpatient clinic. The patient was diagnosed with major depressive disorder according to DSM-5 and daily oral fluoxetine 20 mg treatment was started. Used it for 6 months. The patient came for follow-up 3 weeks after starting fluoxetine again. The itching was completely gone, no additional side effects developed, and she still had no active psychiatric complaints.

**DISCUSSION:** The fact that the severity of symptoms did not decrease within months in our case made us think that this may be a rebound symptom that may occur after the drug is stopped, rather than a withdrawal symptom. Studies suggest that the use of fluoxetine may cause dysregulation of peripheral serotonin receptors, which play a role in the occurrence and perception of pruritus. It is assumed that SSRs increase the level of serotonin in the synapse in the central nervous system while decreasing the level of peripheral serotonin. Decreased peripheral serotonin levels may lead to upregulation of peripheral serotonin receptors in the long term. This may result in increased peripheral serotonin sensitivity and a precipitating cascade of interactions for pruritus. In addition, the long-term recovery of this dysregulation may cause the symptoms to last for 3 months. The absence of pruritus before fluoxetine treatment and the onset of pruritus after its discontinuation increase the possibility that the present symptom is "rebound pruritus". In addition, the lack of benefit from antihistamines weakens its relationship with the histaminergic system, which is often blamed in the pathophysiology of pruritus. On the contrary, the decrease in itching after re-prescribing of fluoxetine suggests the effectiveness of the serotonergic system in the case. There are still insufficient data on the peripheral effects of fluoxetine and its effects on pruritus. More research is needed in this area.

**Keywords:** fluoxetine, withdrawal, rebound, pruritus, ssri

## A CASE OF OLANZAPINE-INDUCED EPILEPTIC SEIZURE IN A PATIENT WITH GENERALIZED ANXIETY DISORDER

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**OBJECTIVE:** It is known that typical antipsychotics can lower the epileptic seizure threshold. Among the atypical antipsychotics, especially clozapine and also olanzapine, whose chemical structure and receptor binding profile are similar to clozapine, have been associated with epileptic seizures. In this presentation, we presented a case of generalized anxiety disorder who had an epileptic seizure after starting olanzapine treatment.

**CASE:** The patient is 24-year-old, female, and she is a university student. She lives alone. No physical disease was found that could explain the patient's condition, whose first complaints started with nausea, vomiting, and weakness when she started university, and who applied to various departments for this reason. The patient applied to the psychiatry outpatient clinic due to the increase in her complaints in the last 1 month in 2017. Paroxetine 20 mg/day, alprazolam 0.25 mg/day, mirtazapine 15 mg/day treatment was started with a preliminary diagnosis of anxiety disorder. Due to the increase in the complaints of the patient who used his treatment regularly, she was admitted to our service with the thought of generalized anxiety disorder. After detecting potassium (K): 3.21 mmol/l in blood tests, 1000 cc ringer lactate and K replacement was performed. Her previous treatment was continued and paroxetine was increased up to 60 mg/day. Mirtazapine was replaced with 15 mg/day haloperidol 10 drops/day. During the treatment, haloperidol was replaced by olanzapine 2.5 mg/day. The patient whose symptoms regressed was planned to be discharged. She have a generalized tonic-clonic epileptic seizure lasting approximately one minute while she was on paroxetine 60 mg/day and olanzapine 2.5 mg/day treatment. No pathology that could explain the situation was detected in blood tests and brain imaging. Her EEG was reported as generalized interictal epileptiform anomaly. The patient was transferred to the neurology department. The patient is still being followed up with paroxetine 60 mg/day and risperidone 1 mg/day. Consent of the patient was obtained for this case report.

**DISCUSSION:** Considering the relationship between seizures and antipsychotics in a study in 2019, the highest risk is seen with clozapine compared to placebo, followed by olanzapine and quetiapine. All other anti-psychotics appear to be indistinguishable from placebo. In addition, other studies have shown that typical antipsychotics have a slightly higher risk than atypical antipsychotics. Our aim in presenting this case was to draw attention to both olanzapine-induced epileptic seizures and the paucity of studies investigating the relationship between antipsychotics and epileptic seizures. At the same time, it was emphasized to start at the lowest dose and to increase the dose slowly when using antipsychotics in patients at risk of epileptic seizures.

**Keywords:** Olanzapine, clozapine, anxiety, epilepsy

## EARLY-ONSET BIPOLAR DISORDER WITH BEGINNING PSYCHOTIC AND AFFECTIVE SYMPTOMS: A CASE REPORT

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**OBJECTIVE:** Psychiatric disorders in adolescence present with different symptoms. In this case report, treatment and recovery process of a 16-year-old-teenager who applied to our outpatient unit with psychotic symptoms was discussed. It is aimed to emphasize importance of differential diagnosis of bipolar disorder in adolescents presenting with psychotic symptoms.

**CASE:** Patient's complaints started with persecutory and reference delusions that her friend would harm her family and following her by plugging cameras into the sockets. In addition, self-talk, echolalia, irritability, anhedonia and withdrawal were added to her symptoms. Sertraline 25 mg and aripiprazole 5 mg treatment were prescribed by child psychiatrist. Patient's complaints partially decreased with this treatment. She continued her current treatment for 9 months but stopped using her medications for last 3 months. During this period, she was brought to the emergency room due to self-harm, repetitive behaviors, aggression, reference and persecutory delusions. Patient was admitted to our inpatient unit with diagnosis of psychotic disorder. Olanzapine, chlorpromazine, diazepam was started and increased gradually to their maximum doses (30 mg, 600 mg, 15 mg per day, respectively). Aripiprazole 5 mg per day was added because of high prolactin level and bilateral galactorrhoea. In the meantime, biperiden 6 mg per day was started for extrapyramidal side effects. During follow-up period, patient had grandiosity, decreased need for sleep, flight of ideas, mood elevation, pressure of speech and distractibility and these symptoms evaluated as manic episode. Sodium valproate was started and increased to until therapeutic serum level was obtained. The patient's manic symptoms decreased, and she discharged with valproic acid 2250 mg, olanzapine 30 mg and diazepam 5 mg per day. Informed consent was taken from patient's parent.

**DISCUSSION:** Studies suggest that psychotic symptoms during the first manic episode and psychotic depression are common in prodromal period in adolescent patients. It has been reported that adolescents with bipolar disorder exhibit significantly more psychotic symptoms than adults. It could be difficult for the clinician to differentiate bipolar disorder and schizophrenia in patients with psychotic symptoms, especially in early adolescence. Although psychotic disorder was initially considered in the patient who applied to our clinic with psychotic symptoms, the patient was diagnosed with bipolar disorder in the process and benefited from mood stabilizer treatment. As a result, it is suggested that it may be beneficial to be careful in terms of differential diagnosis in patients with psychotic symptoms in adolescence.

**Keywords:** Early onset bipolar disease, Psychotic symptoms, Adolescent

## A CASE REPORT; PISA SYNDROME AFTER SINGLE DOSE ANTIPSYCHOTIC

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**OBJECTIVE:** Pisa syndrome presents with reversible lateral trunk dystonia at least 10° lateral flexion while standing although there is no likeminded definition. Pisa syndrome is usually caused by neurodegenerative disorders predominantly Parkinson's disease and others such as multiple system atrophy. Pisa syndrome is commonly associated with prolonged treatment with neuroleptics also with other drugs such as antiemetic, anticholinesterase and psychoactive substance. Also idiopathic Pisa syndrome can be occurred in patients with no medication and without neurodegenerative disorder. Here we present the case of a schizoaffective patient with only a dose haloperidol induced Pisa syndrome.

**CASE:** A 53-year-old woman with a history of 35 years long schizoaffective disorder presented to our emergency psychiatry department with 2 weeks long symptoms of nihilistic thoughts like absence of her pulse, absence of her liver; visual hallucinations of corpses; self mutilative and aggressive behaviors and food refusal. She was under unregular treatment with lithium, risperidone and biperiden. Due to homicidal risk and treatment regulation she was hospitalized. First mental status examination of the patient revealed her negativist attitude, irritable mood, uncooperative and poor eye contact, impoverished and persevered speech. Nihilistic delusions and visual hallucinations were noted. After receiving a single dose intramuscular injection of haloperidol 10mg/ml with 5mg/ml biperiden she developed disorganized behaviors, alteration in posture and rigidity of upper extremities. We observed that she had a risk of falling with lateral bending of the trunk to one side. Her two-sided dorsal and lumbar X-ray graphics showed us that she had lateral flexion of the spine greater than 10 degree due to dystonia of paraspinal muscles. She was diagnosed with Pisa syndrome induced by neuroleptics. Antipsychotic was stopped while benzodiazepine was started. Dystonia was regressed.

**DISCUSSION:** Extrapyramidal side effects of antipsychotic medications vary in a wide range of spectrum. We are familiar to dystonia of neck muscles and muscles of extremities. In some conditions we could come across dystonia of the trunk presenting as lateral flexion of vertebral column known as Pisa syndrome after prolonged treatment of neuroleptics. This case is important for demonstrating that Pisa syndrome can be developed after single dose of antipsychotic injection. The permission for this case presentation has been taken from the patient.

**Keywords:** antipsychotic, dystonia, extrapyramidal side effect, Pisa syndrome

## DEVELOPMENT OF FIRST-DAY HYPONATREMIA ASSOCIATED WITH LOW-DOSE ESCITALOPRAM: A CASE REPORT

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**OBJECTIVE:** Selective serotonin reuptake inhibitors (SSRIs) are frequently preferred drugs due to their safe side-effect profile. Common side effects are gastrointestinal symptoms, headache, irritability, sexual dysfunctions. Hyponatremia is one of its rare side effects. In this case, a 61-year-old male patient who developed hyponatremia on the first day of treatment after starting escitalopram will be presented.

**CASE:** A 61-year-old man patient has no history of psychiatric follow-up or treatment. The patient with the diagnosis of Amyotrophic lateral sclerosis (ALS) was admitted to the intensive care unit due to complaints of poor general condition, difficulty in swallowing, and difficulty in breathing. The patient, who was enterally fed, had tracheostomy, cooperative and poor general condition, was followed up with the diagnoses of ALS and acute respiratory failure. His treatment was arranged as polymyxin, fluconazole, tigecycline, insulin, famotidine, acetylcysteine, noradrenaline. Complaints of constantly answering the questions asked as no, looking unhappy and angry, and not being able to sleep at night were observed in the follow-ups. It has been learned from his relatives that these complaints have been for a long time. Escitalopram 5 mg/day was started. The Na level of the patient, who had a pre-treatment Na level of 133 mEq/L, was found to be 127 mEq/L on the first day of escitalopram treatment. We were consulted for possible drug side effects. In the follow-ups, the Na level remained below 130 mEq/L. Escitalopram was withdrawn on the fourth day due to suspicion of potential side effects of SSRI use. Na level was 133 mEq/L on the first day after drug discontinuation, and 137 mEq/L on the second day. Na level remained within normal limits in the follow-ups. Escitalopram was considered to be related since hyponatremia began on the first day after escitalopram treatment and the Na level dramatically returned to normal after drug discontinuation. Consent was obtained from the patient and his relatives

**DISCUSSION:** Hyponatremia is defined as a serum sodium concentration below 130mEq/L. It is assumed that hyponatremia due to SSRI use is due to inappropriate Antidiuretic Hormone (ADH) release. Inappropriate ADH syndrome is often asymptomatic and idiopathic in the elderly. In particular, drugs such as thiazide diuretics and proton pump inhibitors, malignancies, infections, and intracranial space-occupying lesions may cause inappropriate ADH syndrome. Especially elderly, woman, using diuretics, low body weight and low sodium values are at high risk for the development of hyponatremia. The risk factors for hyponatremia in our patient evaluated for the presence of comorbid disease, presence of infection and hospitalization in intensive care unit. The risk of SSRI-related hyponatremia is highest in the first weeks. The earliest onset in the literature was within second days of starting escitalopram. In our case, due to the development of hyponatremia on the first day after starting low-dose escitalopram, it was evaluated as the earliest onset in the literature and it was aimed to contribute to the literature.

**Keywords:** Hyponatremia, escitalopram, first day

## SOCIODEMOGRAPHIC AND CLINICAL VARIABLES OF THE PATIENTS WITH SUBSTANCE-INDUCED PSYCHOTIC DISORDER IN A UNIVERSITY HOSPITAL INPATIENT CLINIC

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**BACKGROUND AND AIM:** Substances such as alcohol, cocaine, amphetamine, and marijuana can cause psychotic reactions in people who do not already have a mental illness. Many substances have been reported to cause psychosis, including alcohol, marijuana, amphetamines, hallucinogens, phencyclidine, sedatives, inhalants, and even caffeine. In the literature, psychosis secondary to substance use is associated with young age, being single, and being male. Studies have shown that young age and low education level are associated with non-alcoholic substance use. However, substance use and substance choice have change historically and socially. This study aims to describe the sociodemographic data of patients diagnosed with substance use-related psychosis and treated in Gazi University Faculty of Medicine, Department of Psychiatry.

**METHODS:** In the evaluation made by the physician who followed the patient in the Psychiatry Inpatient Clinic of Gazi University Medical Faculty Hospital between 2012 and 2020, 43 patients who were diagnosed with substance use-related psychosis were included. The study was approved by Gazi University Ethics Committee with the decision number 2022-193. The information obtained from the files was processed into the case report form and descriptive statistics were used in the analysis of the data.

**RESULTS:** When the sociodemographic data of 43 patients included in the study were analyzed, the mean age was found to be  $27.5 \pm 7.78$  years. When the marital status of the patients was examined, it was seen that 35 patients (81.4%) were single and 8 (18.6%) were married. The patient was also found to be a university graduate. While 31 patients reported multiple substance use, the remaining 12 patients were using a single substance. It was determined that the mean time from the time the patients started using substances to the diagnosis of substance-related psychosis was  $5.6 \pm 5.27$  years. When the data on the clinical appearances of the patients were examined, it was observed that among the patients with perceptual pathology, derealization-depersonalization was found in 2 patients, visual hallucinations in 6 patients, auditory hallucinations in 11 patients, both auditory and visual hallucinations in 9 patients, and tactile hallucination in 1 patient. When the delusion types of the patients included in the study were examined, it was observed that 10 patients had grandiose delusions, 19 patients had persecutory delusions, 3 patients had bizarre delusions, and 9 patients had referential delusions.

**CONCLUSIONS:** In accordance with the literature, the sociodemographic data of the patients in our study sample were found to be single men, young and low in education. It may be important to consider these data, which can define a sub-risk group, in interventions to prevent substance use-related psychosis.

**Keywords:** Alcohol, Cannabis, Psychosis, Substance Abuse

## A RESEARCH ON HOSPITALIZED PATIENTS BEING TREATED IN PSYCHIATRIC CLINICS: A COMPARISON OF MMPI PROFILES REGARDING SUICIDE ATTEMPTS

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**BACKGROUND AND AIM:** Certain personal traits are known to correlate with suicidal behavior. In this research, personality test (MMPI; Minnesota Multiphasic Personality Inventory) profiles of hospitalized psychiatry patients are observed in terms of their suicidal attempts.

**METHODS:** We retrospectively scanned and examined the files of hospitalized patients who visited the Psychiatry Clinic of Application and Research Hospital of Bülent Ecevit University, Zonguldak, Turkey. The data covers a time span between August 2021 and February 2022. We included patients who had MMPI test in the survey. The patients are evaluated according to their socio-demographic data (age, sex, marital status, level of education) and their history of suicidal attempts. This study was approved by Zonguldak Bülent Ecevit University Clinical Studies Ethical Committee on missing space in 09, 2022 with an approval number of 2022/05.

**RESULTS:** In the research, we examined 47 patient files which consist of 26 (55.3%) female and 21 (44.7%) male. The patient group is divided into three groups in terms of their marital status: 17 (36.2%) single, 21 (44.7%) married, and 9 (19.1%) divorced. Among those, 17 (36.2%) patients have a history of suicidal behavior, and these are distributed as 7 female (41.2%) and 10 male (58.8%). There was no statistical significance between sexes regarding suicidal behavior ( $p = 0.245$ ). The patients with suicidal history have significantly higher scores in their MMPI clinical sub-tests; Psychasthenia (Ps), Schizophrenia (Sc), and Social Introversion (Si), compared to those without suicidal behavior background ( $p=0.041$ ,  $p=0.023$ , and  $p=0.037$ , respectively).

**CONCLUSIONS:** Even though the literature reported suicidal behavior among females more frequently, our research did not find any significant difference among sexes. Moreover, patients with suicidal history are observed to be more social introverts and they use Psychasthenic and Schizoid mechanisms more often. This finding is similar to the findings in the literature. These patients have also been found to have trouble with impulse control and act without regard to consequences. They are observed to be perfectionists, self-criticizing and anxious people when they encounter small problems. In conclusion, our research suggests that MMPI test can be considered as a significant parameter to foresee suicidal attempts.

**Keywords:** suicide, MMPI, suicide attempt, personality

## A CASE OF BIPOLAR DISORDER DEVELOPING LITHIUM-INDUCED THYROTOXICOSIS

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**OBJECTIVE:** Lithium is the most widely used mood stabilizer drug to treat bipolar disorder. Despite its proven effectiveness, it does have some side effects. Cardiac toxicity, renal tubular dysfunction, hypothyroidism, hyperthyroidism, hyperparathyroidism, transient hyperglycemia, nephrogenic diabetes insipidus could occur as side effects. Lithium often has side effects of hypothyroidism. Although rare, cases with hyperthyroidism are also included in the literature. In our case, a bipolar disorder patient who developed lithium-induced thyrotoxicosis was mentioned.

**CASE:** A 32-year-old secondary school graduate female patient. Her first complaints started with depressive symptoms in 2004. She was diagnosed with bipolar disorder in 2009 while she was in a manic episode. While she was using 1000 mg/day of valproic acid, 150 mg/day of quetiapine, and 900 mg/day of lithium in 2011, she was hospitalized in her depressive episode. In routine blood tests, T4: 2.19 µIU/mL, TSH: 0.328 ng/dL, Li 0.56 mmol/L, Valproic acid 86.7 µg/mL, Anti-TPO 9.67 IU/mL. The patient, who also had symptoms of sweating, palpitation, and tremor was consulted to the department of endocrinology. There were no significant findings in the thyroid scintigraphy, and several cystic nodules with a size of 4x2 mm in the left lobe were observed in the doppler ultrasonography. Lithium-dependent thyrotoxicosis was considered by the evaluation of the endocrine department. 10 mg/day of methimazole treatment was started, an iodine-poor diet was recommended, and lithium treatment was continued to date without problem. An informed consent was obtained from the patient.

**DISCUSSION:** Lithium-related thyroid abnormalities have been reported in the literature. Examples of these are euthyroid goiter, hypothyroidism, hyperthyroidism, and autoimmune thyroiditis. In some studies in the literature, it has been reported that hypothyroidism is seen with a prevalence ranging from 6-52%, and the prevalence of thyrotoxicosis is between 1-1.7%. In the literature, it is thought that thyroid destruction with a direct toxic effect in lithium-induced thyrotoxicosis causes thyroglobulin and thyroid hormone release. In the 2nd year of lithium use in our case, considering the somatic symptoms that emerged and laboratory findings it is seen that lithium-induced thyrotoxicosis developed. With this case, it was aimed to draw the attention of clinicians that thyrotoxicosis, as a side effect that could develop in patients treated with lithium, should not be missed.

**Keywords:** bipolar disorder, lithium, thyrotoxicosis

## A CASE OF BIPOLAR DISORDER WHO HAD THREE MANIC EPISODES ASSOCIATED WITH MULTIPLE SCLEROSIS AND STEROID TREATMENT

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**OBJECTIVE:** Multiple sclerosis (MS) is a chronic demyelinating disease of the central nervous system. Neuropsychiatric symptoms are frequently seen in multiple sclerosis. Bipolar disorder is one of the most common mental disorders associated with MS. In MS, attacks of bipolar disorder can be the first symptom, a concomitant diagnosis, or it can be side effect of drugs used for treatment. In this article, a case with MS diagnosis and manic episodes associated with MS attacks and treatment will be presented.

**CASE:** A 38-year-old male patient has been followed up with MS for 12 years and Behçet's disease for 7 years. The patient, who applied to the emergency department with disorganized speech, aggression and persecution thoughts, was admitted to our service with the prediagnosis of Bipolar Disorder Manic Episode. It was learned that after taking methylprednisolone 1 mg/kg intravenous (pulse steroid) for 5 days due to MS attack in 2010, he was hospitalized in an external center with prediagnosis of bipolar disorder manic episode due to complaints of agitation, speaking a lot, and aggression. Valproic acid 500 mg/day was started, and he was discharged after remission. In 2017, pulse steroid for 5 days for an MS attack. One month later from the attack, he was admitted to our service with the diagnosis of bipolar disorder, manic episode with psychotic features, complaints of increased speech volume, disorganized speech, persecution and grandiose thoughts, and reduced sleep time. Risperidone was started in the follow-ups, valproic acid treatment was adjusted as 750 mg/day. Because of risperidone side effects, olanzapine 10 mg/day was started instead of risperidone and he was discharged with remission after 7 days of the inpatient treatment. He was hospitalized in the neurology service on 31 July 2021 due to an MS attack, and pulse steroid treatment was applied for 5 days on 1-5 August. It was learned that the patient applied to the emergency service on August 23, 2021, with disorganized speech, aggression, and thoughts of harming himself, then he was admitted to the psychiatry service with the diagnosis of bipolar disorder manic episode. Haloperidol and biperiden treatment was started and Extrapyramidal system (EPS) symptoms was not occur associated with haloperidol and biperiden. His treatment was arranged as valproic acid 750 mg/day and paliperidone 3 mg/day, he was discharged with remission. In his outpatient follow ups, it was observed from the patient that he used his medications regularly and his well-being continued. Informed consent was obtained from the patient for the case report.

**DISCUSSION:** The case has three manic episodes in his history, all of his manic episodes began after MS attacks and pulse steroid treatments, has no mood episodes other than these periods. The incidence of bipolar disorder has increased in MS patients. The follow-up and observation of patients with MS in terms of both neurological involvement related to the nature of MS and mood disorders that may develop with pulse steroid treatments are presented to the attention of clinicians.

**Keywords:** Bipolar disorder, multiple sclerosis, pulse steroid treatment

## OBSESSIVE COMPULSIVE DISORDER WHICH IS CONSIDERED AS PSYCHOTIC DISORDER FOR 20 YEARS: A CASE REPORT

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**OBJECTIVE:** Obsessive compulsive disorder is a disease that can occur with various symptoms. Psychotic symptoms could accompany other symptoms. The distinction between obsessive compulsive disorder and psychotic disorders could not be clear. In this case report we present a patient, who had been followed up with a diagnosis of psychotic disorder for 20 years and was reconsidered in our psychiatry department as obsessive compulsive disorder.

**CASE:** A 36-year-old primary school graduate female patient has been followed up and treated for 20 years with a diagnosis of psychotic disorder. Her complaints started at the age of 12, as a fear of harming her family. The first admission of the patient to the psychiatry service was about 10 years ago. She was discharged with 300 mg/day of clozapine. Her symptoms partly benefited from clozapine but the treatment was discontinued due to suspected epileptic seizure. Although the patient used different doses of antipsychotics in the following periods, her complaints did not regress. She applied to our clinic when she was using 100 mg/day of clozapine and 100 mg/day of fluvoxamine. Her complaints of hearing voices telling her to harm her family and relatives, fear of harming her family and relatives, passive suicidal thoughts, and sexual obsessions. Voices heard described as auditory hallucinations were interpreted in favor of intrusive thoughts in obsessive compulsive disorder. During the treatment and follow-up in our service, the dose of clozapine was gradually reduced, then discontinued. Aripiprazole and clomipramine were started and titrated to 7.5 mg/day of aripiprazole and 225 mg/day of clomipramine with accompanying cognitive behavioral therapy. The patient is being followed up with partial well-being. An informed consent was obtained from the patient.

**DISCUSSION:** Obsessive-compulsive disorder is a chronic psychiatric disorder with recurrent obsessions and compulsions, which can progress in the form of attacks and greatly affect the life of the person. Although there are various psychiatric symptoms in patients with obsessive compulsive disorder, there are publications in the literature that 10-17% of them are accompanied by psychotic symptoms. The accompanying psychotic symptoms could cause uncertainty in the differential diagnosis of obsessive compulsive disorder and psychotic disorders. Our patient had been receiving treatment with a diagnosis of psychotic disorder for nearly 20 years due to the presence of psychotic symptoms. The interpretation of the sounds heard by the patient as intrusive thoughts and the attempt to relieve the anxiety caused by obsessions with compulsions were evaluated in favor of obsessive-compulsive disorder. It has been emphasized in the literature that patients with psychotic disorders do not try to prevent obsessions and compulsions, their obsessions and compulsions do not limit their lives, and anxiety is less common. Considering these, our case was primarily evaluated as obsessive compulsive disorder and its treatment was arranged accordingly. In our case, it is aimed to emphasize that patients with obsessive compulsive disorder with psychotic symptoms can be confused with psychotic disorder.

**Keywords:** intrusive thought, obsessive compulsive disorder, psychotic disorder

## IS IT DELIRIUM OR DELIRIUM TREMENS?

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**OBJECTIVE:** After alcohol use has been reduced or cut, it is assumed that alcohol withdrawal syndrome (AWS) has developed if two of the following symptoms are present: Autonomic hyperactivity, increased hand tremor, insomnia, nausea, vomiting, visual, tactile, auditory heirs or illusions, psychomotor agitation, anxiety, or tonic-clonic seizures. If the AWS is not properly treated, delirium tremens (DT) may occur. This is a severe hyperadrenergic condition characterized by directional disorder, attention and disorientation, visual or auditory hallucinations. In this case, the patient being followed in intensive care unit (ICU) due to acute pancreatitis will be presented with delirium tremens.

**CASE:** 33 years old male patient, living with his family. The patient, who was followed up in the ICU with the diagnosis of acute pancreatitis, was consulted because of agitation, visual and auditory hallucinations. He had visual and auditory hallucinations. The patient was treated with haloperidol 5 mg of intravenous, considering the chart of delirium due to deterioration in general medical condition. Three days later, it was reported that the patient, again being consulted on the escalation of current complaints, has been using chronic alcohol for 11 years, increased consumption for the last four months (30 standard drinks/days) and has not been using it for three days because of hospitalization. He was conscious and disoriented in his examination. It was a psychomotor agency, and an intermittent cooperative was able to be established. Increased sweating and tremors were detected in his hands. Visual and auditory hallucinations have been watched. The sleep-wake cycle was broken and the total sleep time was reduced. In the physical exam, he blood pressure was high (170/100 mmHg) and he heart rate was increased (120/min). It was thought that the patient's complaints could be caused by alcohol dissection. CIWA-Ar scale was calculated as 30 points. In the case of diagnosis of DT according to the DSM-5 diagnostic criteria, diazepam (4x10 mg intravenous), hydration and thiamine (100 mg/day intravenous) were started. He was offered vitals and blood glucose tracking. In the case of patients with 2 points of CIWA-Ar, diazepam treatment was reduced in the ninth day, with improved orientation, decreased alcohol withdrawal symptoms and decreased diazepam treatment. After completion of acute pancreatitis treatment, it was recommended that alcohol and substance be directed to the treatment center clinic. Consent was obtained from the patient.

**DISCUSSION:** Chronic alcohol use brings many health problems. With a mortality rate of 5-15%, delirium tremens hold a very important place in these health problems. In our case, the current table in the initial evaluation of the patient was considered a mental breakdown in general medical condition. With the patient's anamnesis deepened, it was clear that the current painting was delirium tremens. According to this, a significant improvement has been observed in the clinical condition of the patient planned for treatment. With this case, we aim to highlight the importance of detailed anamnesis and assessment in terms of differential diagnosis.

**Keywords:** Alcohol withdrawal, delirium, delirium tremens

## DIAGNOSIS AND MANAGEMENT OF WERNICKE ENCEPHALOPATHY

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**OBJECTIVE:** Wernicke Encephalopathy (WE) is an acute neuropsychiatric condition caused by exhaustion of B-vitamin reserves, in particular thiamine (vitamin B1). WE commonly caused by alcohol dependence but it can occur in any patient with a nutritional deficiency state. Classical triad of WE consists of confusion, ataxia and ophthalmoplegia but only 10% of the cases present with all classical symptoms. If left untreated, WE can lead to Korsakoff's syndrome in 85% of the patients. Therefore, WE should be treated as a medical emergency. Treatment of WE should be acute and aggressive as Korsakoff syndrome is permanent and devastating. We aimed to present a case report to highlight the importance of early diagnosis by discussing the operational criterias for diagnosis and less common signs that should be taken into consideration.

**CASE:** 62 years old male, married, has 2 kids, educated up to primary school, working as a repairman, has been consuming alcohol for 40 years moderately and 3-4 years heavily until 2 months ago. He has history of urinary tract infection that led to increased creatinine level 2 months ago and he decided to stop consuming alcohol suddenly. After a week, he developed symptoms of abnormal gait, difficulty of walking, muscle contractions and difficulty of speaking. He was assessed by neurologist, urologist and nephrologist focusing on kidney functions and referred to psychiatry 2 weeks later with suspicion of WE. The patient was hospitalized to the psychiatry department with the diagnosis of WE. His entry neurological examination revealed horizontal nystagmus, Lt dominant bilateral dysmetria and Dysdiadochokinesia, ataxia with tandem walking, romberg positivity, postural / action tremor. Not able to walk without support. Patient maintained on B vitamin complex including 800 ml Thiamine (b1) in 1500 cc saline solution + 10 mg folic acid for 5 days. His treatment continued as vitamin B complex including 200 mg Thiamine rest of his hospitalization. His cerebellar symptoms started to diminish at on day 3 and he was able to walk without support at the day of 7. He was discharged from hospital on the day of 7 as the acute condition regressed mostly. He was prescribed with vitamin B injections to be used for 15 days. On control examination only persisting symptom was mild tremor.

**DISCUSSION:** Operational criteria for Wernicke's Encephalopathy are; nutritional deficiency, ocular findings, ataxia and mental status changes 2 out of the following 4 conditions should be sufficient for the diagnosis. However along with these common clinical presentation, few uncommon signs are; stupor, hypotension and tachycardia, hypothermia, bilateral visual disturbances, epileptic seizures, hearing loss, hallucinations and behaviour disturbances. We should not miss questioning recent cessation of alcohol in patients with aforementioned uncommon symptoms, especially in ER settings. In our patient, main focus was on his kidney functions for the first 3 weeks after cessation which caused delay on reaching correct diagnosis.

**Keywords:** Wernicke, Thiamine, Korsakoff, Ataxia, Encephalopathy

## EARLY ALANINE AMINOTRANSFERASE ELEVATION AFTER QUETIAPINE USE

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**OBJECTIVE:** Bipolar disorder encompasses a spectrum of diagnostic subgroups primarily divided according to the severity of mood elevation experienced during acute episodes. On this spectrum, BDI is placed at one pole due to the presence of threshold manic episodes in which features include inflated self-esteem, decreased need for sleep, pressured speech, racing thoughts, distractibility, psychomotor agitation, and risky behaviour that leads to significant functional impairment, and may include psychotic features, and/or necessitate hospitalization. Quetiapine is an atypical antipsychotic used in the treatment of schizophrenia and bipolar disorder. Use of quetiapine has been associated with serum aminotransferase elevations and in rare instances with clinically apparent acute liver injury. In this case, we are talking about a patient with bipolar disorder, whose ALT (alanine aminotransferase) level was found to be elevated after quetiapine use. Informed consent was obtained from the patient.

**CASE:** 26-year-old male patient, single, 6th out of 10 siblings, no history of comorbid disease. The patient was hospitalized with the diagnosis of Bipolar Affective Disorder Manic Episode with symptoms and signs of insomnia, increased self-esteem, excessive spending, increased energy, and logorrhea. Lithium 900mg/d, Aripiprazole 10mg/g, Quetiapine 200mg/g treatments were ordered. It was observed that the ALT value tripled on the 11th day of hospitalization. Quetiapine treatment was discontinued. The patient's ALT value reached normal limits on the 15th day. The patient whose Young Mania Score decreased from 39 to 0; He was discharged in remission with lithium 1200mg/g and Aripiprazole 10mg/g treatments.

**DISCUSSION:** Liver test abnormalities may occur in up to 30% of patients on long term therapy with quetiapine, but elevations are uncommonly above 3 times the upper limit of normal. The aminotransferase abnormalities are usually mild, asymptomatic and transient, reversing even with continuation of medication. Instances of clinically apparent acute liver injury have been reported due to quetiapine, but they are rare. In our case, it was shown that ALT values increased on the 11th day of quetiapine use. Although liver dysfunction is rare in the early period after quetiapine use; Caution should be exercised during the use of quetiapine and liver function tests should be evaluated.

**Keywords:** quetiapine, liver dysfunction, bipolar, alanine aminotransferase

## REMISSION OF CLOZAPINE ASSOCIATED RECURRENT PRIAPISM AFTER AMISULPRIDE AUGMENTATION: A CASE REPORT

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**OBJECTIVE:** Priapism occasionally occurs as an adverse reaction to many drugs. Regarding the psychiatry practice, some of the most candidate agents are trazodone among the antidepressants as well as chlorpromazine and thioridazine among the antipsychotics.

Herein, we reported the resolution of clozapine-associated priapism after amisulpride administration. This case was prepared with informed consent and permission of the patient and his caregivers.

**CASE:** A 32-year-old man had been followed up with the diagnosis of schizophrenia for six years. Also, he denied any medical disease and reported no previous history of hospitalization. From the beginning of his first psychotic episode, he was prescribed various antipsychotics, however patient and his family reported not fully remission. In 2019 November, he was admitted to outpatient unit of psychotic disorders in Cerrahpaşa Medical School with the symptoms of auditory hallucinations, aggression, and anxiety under risperidone 8 mg/day treatment. His psychiatric evaluation revealed that he was awake and fully oriented. The patient reported his mood as anxious due to persecutory delusion and hallucinations as well as his speech being mildly disorganized. Treatment of patient gradually switched to amisulpride 800 mg/day and aripiprazole 400 mg/once-a-month injection treatment, but remission had never achieved. We evaluated the patient as treatment-resistant schizophrenia, then started clozapine and gradually titrated to 400 mg/day. Following clozapine augmentation, remission had been achieved for six months. In May 2020, the patient was forced to discontinue amisulpride because of inadequacy in drug supply. After two weeks of amisulpride discontinuation, the patient developed priapism. He immediately consulted emergency care and the urologist applied cavernosal aspiration-irrigation. According to the patient report, from May to July, the patient experienced priapism episodes at least three times. Each of these episodes, he applied to urological care, and two more cavernosal aspiration-irrigations were performed. During this period, because of the pandemic condition, the patient was implemented telepsychiatric counseling and offered to discontinue the clozapine. However, the patient and his caregivers refused the discontinuation. In July 2020, following the resupply of amisulpride, the patient and treatment team decided to restart the amisulpride regarding the prior stable period in terms of psychiatric and urological conditions. Since amisulpride augmentation, and the patient has never experienced a new priapism episode under clozapine 400 mg/day, amisulpride 400 mg/day, and aripiprazole 400 mg/once-a-month injection treatment with full remission of psychotic symptoms.

**DISCUSSION:** Most antipsychotic drugs have varying degrees of cholinergic, serotonergic, and adrenergic properties along with their dopaminergic effects. Although we know that priapism rarely occurs as a side effect to both clozapine and amisulpride, there are a few case reports described in the literature with these drugs. To our knowledge, our case is the first report of a positive outcome in the amisulpride augmentation for clozapine-associated priapism. In order to get a better understanding of the pathological mechanism of antipsychotic-induced priapism for treatment options, clinical studies with biological perspective are required.

**Keywords:** Amisulpride, Clozapine, Drug-induced, Priapism, Schizophrenia

## CAVUM SEPTUM PELLUCIDUM IN A CASE OF SCHIZOAFFECTIVE DISORDER: A CASE REPORT

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**OBJECTIVE:** Septum pellucidum is a thin layer formed by two laminae forming the medial wall of the lateral ventricles, and when the laminae do not join, a cavity called “cavum septum pellucidum” (CSP) is formed. It is suggested that the anatomical differences detected may also reflect possible embryonal developmental disorders in these anatomical structures, since the formation process is simultaneous with the development of limbic structures such as the corpus callosum, hippocampus, amygdala and septal nucleus, which are adjacent. Such differences in brain structure are thought to be related to the neurodevelopmental etiology of psychosis. The formation of a cystic structure as a result of the septum pellucidum leaves not sticking to each other may be a marker of disruptions in the development of midline brain structures and limbic system dysgenesis. Therefore, it can be thought that it may also be associated with schizophrenia and other psychotic disorders. In this case report, a case of schizoaffective disorder with CSP will be presented.

**CASE:** 52-year-old male patient who is a retired philosophy teacher has been living in a nursing home has been admitted to our clinic. The nursing home does not have clear information about him. We obtained written informed consent from the patient. The patient was taken to the outpatient clinic for blood monitoring due to clozapine use. He was referred to us because of his refusal to eat and drink, his aggressive behavior, the risk of suicide, and the presence of paranoid, grandiose and reference delusions. The patient was admitted to our inpatient clinic. According to him, his complaints were feeling bad, and inability to communicate. It was learned from the health record of him that the patient had been followed for 22 years with the diagnosis of Schizoaffective Disorder. There was no psychiatric history in the patient's family. The patient was treated with clozapine 100 mg 3\*2, valproic acid 500 mg 2\*1 and haloperidol 10 mg 2\*1 in the ward, and he was discharged 25 days after his symptoms subsided. In the neuroimaging of the patient, it was observed that there was a variation of the cavum septum pellucidum. In the literature review, it was learned that the cavum septum pellucidum is associated with psychosis.

**DISCUSSION:** The presence of CSP may be a marker for early developmental disorders of regions of the brain for psychosis patients. It is observed that CSP is associated with symptoms such as severe thought disorders, increased risk of suicide, and loss in cognitive areas such as intellectual function, verbal learning, and memory in patients with psychosis. In addition, since CSP is in close relationship with the limbic system, it may be a marker for the early detection of neuropathological changes such as retardation and seizures. Our case is in agreement with the information in the literature in terms of the severity of symptoms. Further studies are needed for better understanding of the effects of neurodevelopmental pathologies in the case of mood disorders and psychosis.

**Keywords:** Cavum septum pellucidum, Schizoaffective disorder, Neurodevelopmental disorders, Neuroimaging

## LEG EDEMA DUE TO PALIPERIDONE PALMITATE DURING MAINTENANCE MONOTHERAPY OF SCHIZOPHRENIA

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**OBJECTIVE:** Drug-associated peripheral leg edema is most commonly related to steroids, nonsteroidal anti-inflammatory, antihypertensives, and immunosuppressive drugs. The second-generation antipsychotic paliperidone palmitate is uncommonly associated with such oedematous reactions. This side effect of paliperidone palmitate occurs with an increased incidence in higher doses due to its dose-dependent nature. In this presentation, an unusual case of paliperidone palmitate-induced peripheral leg edema in a schizophrenia patient was reported.

**CASE:** A 30-year-old male patient applied to our outpatient clinic with the diagnosis of schizophrenia for the last five years. Routine biochemistry, hemogram, and thyroid function tests were regular. Paliperidone palmitate 6 mg/day was started. After ten days, there were severely edematous lesions (red, warm, and swollen) on both feet and ankles. History of trauma or previous episode of swelling was not reported. As the peripheral leg edema was thought to be associated with paliperidone palmitate usage. Paliperidone palmitate treatment was discontinued. Bilateral peripheral leg edema was gradually diminished and disappeared in five days. This side effect was likely induced by paliperidone palmitate. Written informed consent was obtained from the patient for the case report.

**DISCUSSION:** Despite the low incidence of edema due to paliperidone palmitate usage, the possible occurrence of this side effect should always be taken into thought by psychiatrists.

**Keywords:** drug side effects, edema, paliperidone palmitate, leg

## OLANZAPINE INDUCED SKIN RASH: A CASE REPORT

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**OBJECTIVE:** Olanzapine is an atypical antipsychotic frequently used in many psychiatric diseases, especially in schizophrenia and bipolar affective disorder. Although it is a frequently used safe drug, it has side effects such as sedation, weight gain, constipation, dyspepsia, dry mouth, and dizziness. In addition, it can cause skin reactions like dermatitis. Although it is a rare situation, there is some literature about it. Here, olanzapine-induced skin rash of a young man with delusional disorder is reported.

**CASE:** The 35-year-old male patient has been working in the public sector for the last ten years. He states that his colleagues at work have been talking about him, trying to give messages, and getting him fired for the previous three years. Last week, he fought with his colleagues because of these thoughts. That's why he took annual leave. He was brought to psychiatry accompanied by his relatives. In his mental state examination, he is conscious, cooperative, oriented, self-care is good, looks at his age, his speech rate and amount are normal, affect anxious, temperament: dysphoric, there are reference delusions in his thought. No active suicidal idea/plan. There is a decrease in the amount of sleep. The patient's functionality at work began to decline in line with his reference delusions. Still, there was no decreased functionality in other areas of his life. Olanzapine 10 mg was started with a preliminary diagnosis of delusional disorder. Brain MRI and EEG results were normal. He was called for control one week later. When the patient came for control, there were itchy rashes compatible with allergic dermatitis on both chests. He had eosinophilia in his hemogram. The patient used no additional drug and had no other disease. Olanzapine was discontinued, and aripiprazole 10 mg was started. The patient's skin rash and itching regressed. Photographs of the lesions were taken for case reporting. Written and verbal consent was obtained from the patient.

**DISCUSSION:** It is known that various side effects can be seen with olanzapine. However, although there are case reports on this subject in the literature, our knowledge of skin lesions caused by olanzapine is insufficient. Therefore, this case report aims to raise awareness about skin lesions that may be caused by olanzapine.

**Keywords:** Adverse Drug Reaction, Dermatitis, Drug eruptions, Olanzapine,

## HOW PARENTS SEE ADOLESCENTS: A PRELIMINARY STUDY

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**BACKGROUND AND AIM:** Adolescents apply to psychiatrists with various problems. These problems may be related to each other. There are frequent differences between the problems voiced by adolescents and those voiced by their families. Adolescence is a period in which adolescents think that they are not understood by their parents. In this study, it was aimed to investigate whether parents noticed the problems in adolescents and relationship between different symptom areas determined by parents in adolescents.

**METHODS:** The study was approved by the "Ankara University Faculty of Medicine Non-Invasive Clinical Research Ethics Committee" (Decision No:101-11-22). The study included 24 adolescent patients aged 13-17 (median 15 ± 1.3), including 14 girls (%58) and 10 boys (%42), who applied to the Department of Child and Adolescent Psychiatry at Ankara University Faculty of Medicine due to varied reasons from Januar 2022 to March 2022. The Symptom-Checklist-90-Revised was applied to the adolescent participants and Conners Parent Rating Scale Revised Long Version was applied to the parents. The scl-90 was used to determine the level of psychiatric symptoms in adolescents and Conners Scale was used for mental symptoms that parents see in adolescents.

**RESULTS:** According to Mann Whitney U Test,

- According to Scl-90, 33.3% (n=8) of adolescents reported anxious symptoms and 25% (n=6) reported somatic symptoms.
- Parents of 33% (n=3) of anxious adolescents reported that they had anxious symptoms according to the Conners scale.
- There was no significant difference between the 'Conners-Parent-Anxiety-Shyness' sub-scores between adolescents with high anxiety levels- detected by scl-90(mean: 13.39) and adolescents with low anxiety levels- detected by scl-90 (mean: 11.97). (p>.05)
- There was no significant difference between the 'Conners-Parent-Psychosomatic'sub- score between adolescents with high somatic symptoms- detected by scl-90 (mean: 13.33) and those with low-detected by scl-90 (mean: 10.81). (p>.05)
- According to Conners Scale; adolescents with a high level of interpersonal problems (mean: 16.06) had a significantly higher 'cognitive problems/inattention' sub-score than those with low levels (mean: 9.83). (p<.05)
- According to Conners Scale; adolescents with a high level of interpersonal problems (mean: 16.38) had a significantly higher 'Social Problems' sub-score than those with low levels (mean: 9.67) (p<.05)

**CONCLUSIONS:** In this study, no relationship was found between anxiety and somatic symptoms reported by parents in adolescents and anxiety and somatic symptoms reported by adolescents themselves. This suggests that parents do not recognize the anxious and somatic symptoms in adolescents; suggesting that they misinterpreted some symptoms as anxious or somatic. Interviews to increase communication between parents and adolescents, and attempts to raise this awareness in parents and adolescents are important.

And also this study suggests that, interpersonal relationships in adolescents can be affected by social problems, attention problems and impulsivity. It is necessary to pay attention to these problems in interpersonal problems of adolescents.

**Keywords:** Parents, Adolescents, scl-90

## PSYCHOTIC SYMPTOMS ACCOMPANYING FAHR SYNDROME

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**OBJECTIVE:** Fahr Syndrome is a rare neurological disorder characterized by abnormal calcium deposition in the basal ganglia (lenticular nucleus and the internal globus pallidus) and hypocalcemia in the brain region where movements are controlled and fine tuned. Associated neuropsychiatric symptoms with Fahr Syndrome are generally difficulty in concentration, personality and memory changes, behavioral problems, psychosis, and dementia. About 40% of patients with basal ganglia calcification may present with psychiatric symptoms such as mania, apathy, psychosis, etc. In this case, a patient with a psychotic episode caused by hypocalcemia due to Fahr's syndrome is mentioned. Oral consent was obtained from the patient for the case presentation.

**CASE:** 41-year-old housewife patient, 5th grade dropout, has been followed up with a diagnosis of psychosis suggested to be related with Fahr's syndrome diagnosed for 8 years is hospitalized. In her anamnesis, it was learned that the signs and symptoms appeared about 8 years ago with presenting deterioration in mental functions, disorganized and hallucinatory behaviors, tremor and psychotic findings. She has been in remission with clozapine 200 mg/perday for 2 years. She has been taking clozapine regularly but cessed calcium supplement for about 6 months because of constipation that has been used for the treatment of hypocalcemia caused by Fahr's syndrome. She was admitted to our clinic with the diagnosis of psychotic exacerbation with psychomotor agitation and excitation, persecution delusions, disorganized behaviors, and auditory and visual hallucinations. A chvostek sign was detected on physical examination. In laboratory findings serum calcium level was measured as 6.03 mg/dl (normal reference range of our hospital is 8.6 - 10.2 mg/dl). There were no other pathological findings in blood tests. In brain magnetic resonance imaging; calcification in bilateral caudate nucleus head, lentiform nucleus, internal globus palidus and posterior part of thalamus was seen. In addition to the patient's current clozapine 200 mg/perday treatment, calcium and calcitriol treatment was administered. It was observed that the serum calcium level increased to 8.65 mg/dl after approximately 2 weeks of hospitalization, the psychotic symptoms subsided when the calcium treatment returned to normal limits, and the PANNS score regressed from 83 to 40.

**DISCUSSION:**Treatment of clinical signs and symptoms of Fahr Syndrome depends on the correction of the underlying cause. It has been observed that with appropriate approach and treatment psychotic symptoms possibly caused by hypocalcemia was relieved by normalisation of serum calcium level. As seen in our case, organic causes that may cause the psychiatric conditions should be investigated if suspected for optimal treatment.

**Keywords:** psychosis, neuropsychiatry, fahr syndrome

## PAROXETINE-INDUCED ACUTE PANCREATITIS: CASE REPORT

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**OBJECTIVE:** Acute pancreatitis is a disease with high morbidity and mortality. One of the important factors in the etiology is drugs. Paroxetine is an SSRI antidepressant that is frequently used in many psychiatric diseases, especially depression. We aimed to report a case of paroxetine induced acute pancreatitis and draw attention to the risk of developing acute pancreatitis due to paroxetine.

**CASE:** A 62-year-old female patient was admitted to our clinic with complaining of unhappiness, pessimism, crying, passive suicidal thoughts and loss of appetite for the last 1.5 months. She was diagnosed with major depression. At that time, the patient had been taking venlafaxine 300 mg/day, lamotrigine 200mg/day, quetiapine XR 150 mg/day and alprazolam 1mg/day for 13 years. No significant pathology was observed in the physical examination. In her general medical condition no current disease was detected. Besides her current medication we decided to start on ECT which was stopped after the 7th session because the patient's blood pressure increased during ECT. Paroxetine 10mg/day was added to the treatment and increased to 30 mg/day gradually. Two weeks later, the patient complained of mild low back pain, vomiting and nausea. The blood tests revealed that increased levels of amylase and lipase (3444,9653 respectively). The CT scan and USG revealed features suggestive of non-biliary necrotising acute pancreatitis. Supportive treatment was started and her psychiatric medication was stopped. Meanwhile, lorazepam 4 mg/day was given to relieve withdrawal symptoms and anxiety symptoms. The patient was referred to the gastroenterology unit in order to close monitoring. 10 days later the patient was readmitted to our service. She was commenced on sertraline 75mg/day and quetiapine 200mg/day. She was discharged after an improvement of her condition.

**DISCUSSION:** Acute pancreatitis is a high-risk disease in terms of mortality and morbidity. Drugs are one of the most common causes of acute pancreatitis. Major depression, on the other hand, is a common disease that causes high disability, it is also important in terms of death risk. The treatment of depression is mostly based on drugs, and these drugs include SSRIs. The reason for this is that SSRIs are both effective in treatment and harmless in terms of side effects compared to other groups. Paroxetine is also one of the frequently preferred ones in clinical use in this group. In this case, a female patient with the diagnosis of major depression, who started using paroxetine in addition to medication she took before, was thought to develop acute pancreatitis due to paroxetine. We wanted to reportmention a serious side effect that may be caused by the use of paroxetine.

**Keywords:** acute pancreatitis, major depression, paroxetine, ssri

## THE RELATIONSHIP OF MIND WANDERING AND MALADAPTIVE DAYDREAMING WITH CHILDHOOD TRAUMAS IN INDIVIDUALS WITH ADHD

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**BACKGROUND AND AIM:** Attention Deficit Hyperactivity Disorder (ADHD) is a childhood-onset neurodevelopmental disorder characterized by attention deficit, hyperactivity, and impulsivity. ADHD is a risk factor for many psychiatric disorders, including mood, anxiety, eating, trauma-related, substance-related, and addictive disorders. Studies on the neuropsychological effects of childhood adversities in adulthood are increasing. Our aim in this study is to examine the relationship between ADHD symptoms, mind wandering, and maladaptive daydreaming symptoms with childhood traumas in individuals with ADHD.

**METHODS:** Forty-nine drug-naive individuals admitted to the adult neurodevelopmental disorders outpatient clinic and diagnosed with ADHD were included in the study. Participants completed a questionnaire consisting of a sociodemographic data form, the Adult ADHD Self-Report Scale (ASRS), Mind Excessively Wandering Scale (MEWS), Maladaptive Daydreaming Scale (MDS) and Childhood Trauma Questionnaire (CTQ). The study protocol was approved by the Selçuk University Local Ethics Committee (2022/113).

**RESULTS:** Participants' ages ranged from 18 to 34 (mean of 22,37±3,5), and 42,9% (n=21) reported that they smoked, and 34,7% (n=17) used alcohol, and 61,2% (n=30) of them had comorbid psychiatric disorders. Our findings revealed a positive correlation between ADHD symptoms with MEWS ( $r=0,5$ ;  $p<0,01$ ), and MDS ( $r=0,3$ ;  $p=0,04$ ) scores in individuals with ADHD. A regression analysis to examine related factors associated with excessive mind wandering found that attention deficit symptoms ( $t=2,53$ ;  $p=0,02$ ), but not hyperactivity/impulsivity symptoms were associated with MEWS scores. Additionally, there was no correlation between maladaptive daydreaming and mind-wandering scores with childhood trauma scores.

**CONCLUSIONS:** There is increasing evidence that individuals with ADHD may have characteristic features in mental activities (E.g.; mind-wandering) as well as the findings of our study also confirmed this. Mentation processes such as mind-wandering and daydreaming may contribute to ADHD symptoms in individuals with ADHD. However, longitudinal clinical studies with more participants are needed to examine the relationship of these mental activities with childhood trauma.

**Keywords:** ADHD, childhood trauma, daydreaming, mind-wandering

## ARIPIPROZOLE AND CLOZAPINE COMBINATION IN EARLY ONSET SCHIZOPHRENIA: A CASE REPORT

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**OBJECTIVE:** Schizophrenia is a multifactorial neurodevelopmental disorder that begins mostly in late adolescence. It is known that early-onset schizophrenia worsens the prognosis. In this study, it is aimed to show a partial response to treatment with the use of aripiprazole and clozapine in a case of early-onset schizophrenia. In addition, it is intended to draw attention to the limitations of pharmacological treatments used in early-onset resistant schizophrenia.

**CASE:** Informed consent was taken from patient's parent. A 14-year-old female patient approached our outpatient clinic with insomnia and crying, irritability, feeling persecuted, and thinking that one is being hurt. First complaints started 4 years ago and was referred to psychiatry. Started with 4 mg risperidone and added olanzapine, then increased to 20 mg. Clonazepam was added for the patient whose complaints increased for 2 months. The patient who did not benefit was admitted to the service for treatment and followup. Although her agitation and aggression regressed during the patient's follow-up on the ward, her appraisal of reality was distorted, her associations were scattered, her thought content was poor, and persecutory delusions were active. At the request of her family, she was discharged after 2 months of care with risperidone 8 mg, aripiprazole 30 mg, diazepam 15 mg, and biperiden 6 mg after obtaining her family's consent to refuse. The patient, whose symptoms persisted during follow-up, was readmitted to the hospital. Risperidone was tapered and discontinued after her complaints persisted, and haloperidol was started at 2.5 mg and increased to 20 mg/day. It was observed that her delusions decreased, her irritability decreased, and the patient's diazepam dose was reduced and discontinued. With a diagnosis of schizophrenia, the patient was discharged with treatment with haloperidol 20 mg, aripiprazole 30 mg, and biperiden 6 mg. The patient, who had an emergency call due to agitation and aggression, was admitted with a plan to start clozapine and increase the dose to 400 mg because of increasing symptoms despite taking medication regularly. The dose increase of clozapine was postponed because of the patient's covid-19 infection and tachycardia. The patient who experienced the tachycardia visited the cardiology department, where the symptoms decreased. Increasing the clozapine dose because of the sinus tachycardia was safe. The patient's agitation due to hallucinations and delusions decreased with clozapine 400mg/day and aripiprazole 30mg/day. It was thought that the combination of clozapine and aripiprazole partially helped her.

**DISCUSSION:** Due to the fact that children and adolescents are more sensitive to antipsychotics, close follow-up was required in terms of cardiac and extrapyramidal side effects were observed in our case. The AACAP application parameters recommend that a different antipsychotic agent may be tried if insufficient effects are seen after a 6-week trial at adequate doses. A review of the literature shows that combining clozapine with agents such as amisulpride, aripiprazole, and mirtazapine has positive effects in resistant cases. After 6-week trials with different antipsychotics, the combination of clozapine and aripiprazole proved to be most effective for the patient. Because the patient's positive symptoms persisted despite the remission, various treatment options came up. There are insufficient studies in the literature on the treatment of resistant early schizophrenia, and further studies are needed.

**Keywords:** early-onset schizophrenia, resistant schizophrenia, aripiprazole and clozapine combination

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## A.

*Türk Psikiyatri Dergisi*, öncelikle klinik psikiyatri olmak üzere davranış bilim-leri alanındaki çalışmalara yer verir.

Dergi Türkçe olarak basılır ve makaleler çevrimiçi olarak İngilizce ve Türkçe yayınlanır. Türkiye içinden gönderilen makalelerin Türkçe olması gerekmektedir. Değerlendirme süreci tamamlanan ve yayına kabul edilen Türkçe makalelerin İngilizce çevirilerinin yazarlar tarafından gönderilmesi gerekmektedir. Yayın Kurulu gerekli hallerde çeviri tekrarını isteyebilir ya da çeviren tercümanın yetkinliğine dair belge talebinde bulunabilir. Yurtdışı adresli yazarlar Türkçe veya İngilizce olarak gönderilebilir. Yayına kabul edilen İngilizce makalelerin Türkçe çevirileri profesyonel çevirmenlerce yapılmaktadır.

Dergiye gönderilen yazıların daha önce yayınlanmamış olması, başvuru esnasında başka bir dergide yayın için değerlendirilmeyen olması ya da yayın için kabul edilmediği halde yayın için değerlendirilmeyen olması ve araştırma yazılarının uzunluğu, şekil ve tablolar dahil Times New Roman karakterinde 12 puntoda çift aralıklı 20 sayfayı geçmemelidir. Danışman önerileri doğrultusunda bu uzunluk değişebilir. Yazılara en az 150 en çok 200 sözcükten oluşan Türkçe, en az 230 en çok 250 sözcükten oluşan İngilizce özet eklenmelidir. Araştırma yazılarının Türkçe ve İngilizce özetleri şu alt başlıklar ile yazılmalıdır: Amaç (*Objective*), Yöntem (*Method*), Bulgular (*Results*), Sonuç (*Conclusion*).

### 1. ARAŞTIRMA YAZILARI

Bilimsel yöntem ve kurallara uygun olarak yapılmış araştırmaların bildirimleri bu bölümde yer alır.

### 2. GÖZDEN GEÇİRME YAZILARI

En yeni bilgileri kapsamlı olarak gözden geçiren ve tartışan yazılar bu bölümde yayınlanır.

### 3. OLGU SUNUMLARI

İlgili klinik olguların sunumları yer alır. Bu yazıların çift aralıklı 10 sayfayı geçmemesi gerekir.

### 4. DİL SORUNLARI

Psikiyatri alanındaki dil tartışmaları bu başlık altında yayınlanır.

### 5. MEKTUP

Bu bölümde Dergi'de yer alan değişik konularda tartışma forumu oluşturabilecek mektup ve görüşler yayınlanır.

### 6. KİTAP TANITIMI

İlgili alanlarda yayınlanmış kitapların tanıtım ve eleştirisini içeren yazılar bu bölümde yer alır.

## B.

1. Türk Psikiyatri Dergisi'nde yayınlanması istenen yazılar çevrimiçi (online) olarak gönderilmelidir. Çevrimiçi yazılar [www.turkpsikiyatri.com](http://www.turkpsikiyatri.com) adresindeki çevrimiçi bağlantısından yüklenir.
2. Yazarlar doğrudan çalışmayı yapan ve yazan kişiler olmalıdır. Çalışmayı destekleyen ya da çalışma ile ilgili danışılan kişilerin adları, gerekiyorsa, teşekkür bölümünde anılmalıdır. Araştırma yazılarında çalışmanın yapıldığı kurum belirtilmelidir.
3. Yayınlanmak üzere gönderilen yazıların araştırma ve yayın etiğine uygun olmaları gereklidir. Araştırma yazılarında Etik Kurul onayına ilişkin bilgiler bulunmalıdır.
4. Türk Psikiyatri Dergisi'ne gönderilen ölçek geçerlik-güvenilirlik çalışmalarının yayına kabul edilmesi durumunda, ölçeğin kendisi (özgün ya da çeviri) Dergi web sitesinde yayınlanacaktır. Ölçek çalışmaları ile ilgili yazıların değerlendirme için kabulü aşamasında, bu koşul yazarlara bildirilecek; yazarlar bu koşulu kabul ettikleri takdirde yazı değerlendirme sürecine alınacaktır. Dergi web sitesinde ölçekle birlikte, ölçeğin kullanım ve telif hakları ile ilgili bilgiler de verilecektir.
5. Çevrimiçi olarak yüklenen yazılarda ilk iki sayfada sırayla Türkçe ve İngilizce özet yer almalıdır. Özetlerin başına yazının Türkçe ve İngilizce başlığı, sonuna ise 3-6 anahtar sözcük konmalıdır. Türkçe anahtar sözcükler <http://www.bilimterimleri.com> adresinden, İngilizce anahtar sözcükler ise <http://www.ncbi.nlm.nih.gov/mesh> adresinden seçilmelidir. Özet sayfalarından sonraki sayfalar numaralandırılmalıdır. Başvurulara yazının eklendiği dosyada yazar adı ve adresi bulunmamalıdır.
6. Yayınlanması düşünülen yazıların eleştirisi ve öneriler doğrultusunda gözden geçirilmesi yazarlardan istenebilir. Yazarların onayı alınmak koşulu ile yayın kurulunca yazılarda değişiklik yapılabilir. Gönderilen yazı ile ilgili gelişmeler e-posta adresine bildirilir. Dergi'de yayınlanan yazılar için ücret ya da karşılık istenmeyeceği gibi ücret ya da karşılık da ödenmez.
7. Yazılar kolay anlaşılır olmalı, elden geldiğince yabancı sözcüklerin Türkçe karşılıkları kullanılmalı, alışılmamış sözcüklerin yabancı dildeki karşılıkları ilk

kullanımlarında araç içinde verilmelidir. Yazı içinde geçen ilaçların ticari adları yerine jenerik (etken madde) adları Türkçe okunduğu biçimiyle verilmelidir.

8. Yazılarda dipnot kullanılmamalı, açıklamalar yazı içinde verilmelidir.
9. Her şekil ve tablo ayrı bir sayfaya çizilmelidir. Şekiller, fotoğraf filmi alınabilecek kalitede basılmalıdır. Tablolara ilgili başlık ve bilgiler tablonun verildiği sayfada yer almalıdır. Metin içinde de şekil ve tabloların yerleri gösterilmelidir.
10. Kaynaklar metin içinde yazarların soyadı ve yazının yayın tarihi ile belirtilmeli, yazar ve tarih arasında virgül konmamalıdır. İki den fazla yazar varsa birinci yazarın soyadı "ve ark." ibaresiyle verilmeli, iki yazar varsa her ikisi de belirtilmelidir.

Örnekler: Bu konuda yapılan bir çalışmada (Crow 1983)...., Crow ve Snyder (1981) şizofreni konusunda...., ...ilgili çalışmalar (Snyder ve ark. 1982)...., ...bir çalışmada (Crow ve Snyder 1981)...

Aynı yazının aynı yıla ait değişik yayınları ise (Freud 1915a), (Freud 1915b) şeklinde belirtilmelidir. Aynı noktada birden çok kaynak belirtileceği zaman kaynaklar aynı araç içinde, birbirinden virgül ile ayrılarak verilmelidir. Örnek: (Crow 1981, Snyder 1980); (Crow 1981, Snyder ve ark. 1970)

11. Metin sonunda kaynaklar ayrı bir liste olarak alfabetik sıra ile verilmelidir. Yazar(lar)ın soyad(lar)ı ve ad(lar)ının baş harf(ler)i arada nokta ya da virgül olmadan belirtilmelidir. Bir kaynaktan üçten çok yazar varsa üçüncü yazardan sonra "ve ark." ibaresi yer almalıdır. Bunların ardından kaynağın basım tarihi araç içinde verilmelidir.

- a) Kaynak bir makale ise tarihin ardından makalenin tam adı, yayımlandığı derginin adı (Index Medicus'daki kısaltmalardan yararlanılmamalıdır), cilt no (cilt no belirtilmemişse, araç içinde sayı no) ve sayfa numaraları yazılmalıdır.

Winokur G, Tsuang MT, Crowe RR (1982) The Iowa 500: affective disorder in relatives of manic and depressed patients. Am J Psychiatry 139: 209-12.

- b) Bir derginin ek sayısı (supplementum) kaynak gösterileceği zaman; Kozkas HG, Homberg LK, Freed GD ve ark. (1987) A pilot study of MAOIs. Acta Psychiatrica Scand 63 (Suppl. 290): 320-8.

- c) Kaynak bir kitap ise yazar(lar)ın adı ve basım tarihinden sonra kitabın adı, -birden çok basımı varsa- kaçınıcı basım olduğu, basım yeri, basımevi ve sayfası belirtilmelidir. Kitap bir çeviri ise çeviren(ler)in adı verilmelidir. Mark IMJ (1987) Fears, Phobias and Rituals. New York, Oxford University Press, s. 97.

- d) Kaynak çok yazarlı bir kitabın bölümü ya da bir makalesi ise bölümün ya da makalenin yazarı, tarih, bölümün ya da makalenin adı, kitabın adı, kaçınıcı baskı olduğu, cildi, kitabın editörleri, basım yeri, basımevi ve sayfaları yazılmalıdır.

Meltzer HY, Lowy MT (1986) Neuroendocrine function in psychiatric disorders. American Handbook of Psychiatry, 2. Baskı, cilt 8, PA Berger, HKH Brodie (Ed), New York, Basic Books Inc, s. 110-7.

- e) Türkçeye çevrilmiş kitap ve dergileri kaynak gösterirken:

1. Hangi kaynaktan yararlanıldıysa kaynak olarak gösterilmelidir (Türkçesi veya aslı).
2. Türkçeye çevrilmiş kitaplar aşağıdaki şekilde kaynak gösterilmelidir.

Wise MG, Rundel JR (1994) Konsültasyon Psikiyatrisi (Çev.: TT Tüzer, V Tüzer). Ankara, Compos Mentis Yayınları, 1997, s. 15-30.

Metin içinde "Wise ve Rundel (1994)" şeklinde verilmelidir.

3. Sık kullanılan çeviri kaynaklara örnekler:

Amerikan Psikiyatri Birliği (1994) Mental Bozuklukların Tanısal ve Sayımsal El Kitabı, Dördüncü Baskı (DSM-IV) (Çev. ed.: E Köroğlu). Ankara, Hekimler Yayın Birliği, 1995.

Metin içinde "Amerikan Psikiyatri Birliği (1994)" şeklinde belirtilmelidir.

Dünya Sağlık Örgütü (1992) ICD-10 Ruhsal ve Davranışsal Bozukluklar Sınıflandırılması (Çev. ed.: MO Öztürk, B Ulug, Çev.: F Çuhadaroğlu, İ Kaplan, G Özgen, MO Öztürk, M Rezaki, B Ulug). Ankara, Türkiye Sinir ve Ruh Sağlığı Derneği Yayını, 1993.

Metin içinde "Dünya Sağlık Örgütü (1992)" şeklinde yer almalıdır.

- f) Sadece Internet üzerinden yayınlanan bir dergide (genellikle cilt ve dergi sayıları, sayfa numaraları yoktur) yer alan makale kaynak olarak gösteriliyorsa:

1. Tam yayın tarihi kullanılmalıdır.
2. Makaleye doğrudan ulaşım adresi ve indirilen tarih verilmelidir.

Frederickson BL (2000, Mart 7). Cultivating positive emotions to optimize health and well-being. Prevention & Treatment 3, Makale 0001a. 20 Kasım 2000'de <http://journals.apa.org/prevention/volume3/pre003000-1a.html> adresinden indirildi.

12. Kaynakların doğruluğundan yazar(lar) sorumludur. Doğrudan yararlanılmayan ya da başka kaynaklardan aktarılmış kaynaklar belirtilmemeli, basılmamış eserler, kişisel haberleşmeler, Medline taramalarından ulaşılan makalelerin özetleri kaynak gösterilmemelidir.

