Türk Psikiyatri Dergisi
Turkish Journal of Psychiatry

Letter to Editor

Pretibial Edema Induced by Risperidone Monotherapy: A Case Report

Gonca Gül ÇELİK, Ayşegül YOLGA TAHİROĞLU, Ayşe AVCI

Edema is rare side effect due to antipsychotic medication. The knowledge about edema related risperidone limited to adult case reports. Although risperidone is the most common used antipsychotic for child and adolescent psychiatric patients, risperidone mono-therapy related edema was not reported previously in this age period. In this study, a girl was at the age of 14 who had pretibial edema due to risperidone mono-therapy is reported. All organic examination was normal during this side effect. Her edema was resolved 2 week after the stopped risperidone treatment and edema wasn't seen again during another antipsychotic treatment. Risperidone is a serotonin 2A/dopamine-2 (5HT2A/D2), noradrenergic α-1 and α-2 receptor antagonist. However, risperidone may cause edema with peripheral α-2 receptor blockage. The studies are need which investigated pathogenesis of edema a side effect of antipsychotic in addition to metabolic side effects of antipsychotic. In this case, it seems that changing of the drugs is enough to control of edema but it is not well known what the good clinical practice is in the edema cases. Frequency of edema related antipsychotic and good clinical practices in this case should be searched through the large clinical samples.

Key Words: *Antipsychotic, risperidone, side effect, anxiety, seperation anxiety*

INTRODUCTION

Adolescents are very sensitive to weight gain, hyperprolactinemia, and galacthorea induced by second-generation antipsychotics (Martin and L'Ecuyer, 2002). Risperidone is the most commonly used antipsychotic in children and adolescents: as such, its side effects are well known. In the adult psychiatric population, risperidone monotherapy-related edema has been reported, but there are no reports of it in children and adolescents (Ravasia, 2001). Pedal edema related to combination treatment consisting of risperidone, carbamazepine, and sodium valproate was reported in a 16-year-old boy with severe learning disability, autism, and epilepsy (Feroz-Nainar et al., 2006).

The present study reports an adolescent case with pretibial edema induced by risperidone monotherapy and discusses this rare side effect.

Case Report

The patient was a 14-year-old female with mental motor retardation. She was sexually abused by her brother and, as a result, was 28 weeks pregnant.

On psychiatric examination, her mood was depressive and included sadness, diminished interest in other people and/or activities, and suicidal ideation. Her perception, memory, and orientation were normal. Her aggressive behaviors were considered; she harmed herself, other people, and things. In response to questions about being sexually abused she exhibited symptoms of anxiety, her insomnia exacerbated, and she had nightmares. Inpatient treatment was planned based on the diagnoses of metal retardation and anxious-depressive adjustment disorder.

She was hospitalized in a residential treatment center for abused girls at Çukurova University Medical School, Child and Adolescent Psychiatry Department. This center provides both psychiatric treatment and protection for abused girls, enabling long-term follow-up of cases. She was admitted as an inpatient as a form of protection due to death treats by her family; she remained in the center throughout her pregnancy and postpartum period. Psychiatric monitorization of the

Received: 14.07.2008 – **Accepted:** 30.10.2008

Ayşegül Yolga Tahiroglu, e-mail: *ayolga@gmail.com*

case was made twice a week by a child and adolescent psychiatrist. Due to her pregnancy she did not receive any pharmacotherapy for the first few weeks of her treatment; however, haloperidol 1 mg/day was started because she became severely agitated, tried to harm her fetus, and attempted suicide. After the birth of her baby, her agitation became more severe and suicidal attempts increased in frequency; therefore, haloperidol was increased to 2 mg/day. Extra pyramidal side effects were observed during the first week of this treatment. Haloperidol was stopped and risperidone 1 mg/day was given after a 72-hour washout period. During the fourth week of risperidone treatment the severity of her agitation decreased, but bilateral pretibial edema was observed. She gained about 4 kg and her feet grew two show sizes. Additionally, she declared swelling and weakness. In this residential center, 1 doctor and 1 nurse serve 24-hour shifts. In this way, she was systematically examined every day; other than edema, no other side effects were observed. The severity of her edema remained constant throughout the day. She continued her daily activities, her diet and liquid consumption were monitored, and probable risks associated with daily habits and diet weren't determined associated with edema. Standard urine tests, renal and hepatic function, serum electrolytes, urine and blood protein and albumin, thyroid function, FSH, LH, and prolactin titers were examined to determine the etiology of her edema, all of which were normal. Consequently, risperidone medication was decreased and then stopped. The patient's edema resolved 2 weeks later. Then, haloperidol 1 mg/day and biperiden 2 mg/day were given and there was no recurrence of edema. Her psychiatric symptoms did not exacerbate and no side effects were observed for 3 mounts.

DISCUSSION

Risperidone is a serotonin 2A/dopamine-2 (5HT2A/D2) noradrenergic α-1 and α-2 receptor antagonist (Stahl, 1999). Risperidone may not only be a central α-2 receptor blocker, but also a peripheral α-2 receptor blocker. Peripheral α receptor blockage may result in peripheral vasodilatation and edema (Feroz-Nainar et al., 2006). Postpartum hormonal changes also might have played a role in the etiology of edema in the presented case, but all laboratory examinations and hormone profiles were normal. Additionally, as she did not nurse her baby, hormonal changes due to lactation might have been reduced. In the presented case it seems that the edema was related to risperidone medication, as it improved after the medication was withdrawn and wasn't observed after treatment with two other antipsychotics.

Similar to the presented case, one other case of edema related to risperidone treatment was reported in an adolescent that also had mental retardation. As such, we think that developmental retardation might be associated with a tendency for edema; however, there is insufficient data for a definitive conclusion.

Edema related to antipsychotics is a very rare side effect; therefore, our knowledge of effective clinical practices for edema related to antipsychotic agents is limited. As same as our case, changing medication may be sufficient. On the other hand, the risks associated with the use other antipsychotics aren't well known in patients with edema related to antipsychotics. Severe edema is a rare but important antipsychotic side effect. Allergic reaction and edema induced by risperidone has been reported (Terao, 1998). Moderate edema may be more common, but hasn't been sufficiently studied. Risk factors and the frequency of edema related to antipsychotics should be investigated with controlled clinical studies.

REFERENCES

Feroz-Nainar C, Selvaraj P, Roy M et al. (2006) Risperidone induced edema in a child with learning disability and autism. Autism, 10:308-310.

Martin A, L'Ecuyer S (2002) Triglyceride, cholesterol and weight changes among risperidone-treated youths. A retrospective study. Eur Child Adolesc Psychiatry, 11:129-133.

Ravasia S (2001) Risperidone induced edema. Can J Psychiatry, 46:453-454.

Stahl MS (1999) Psychopharmacology of Antipsychotics London, Dunitz.

Terao T, Kojima H, Eto A et al. (1998) 'Risperidone and Allergic Reactions', Journal of Clinical Psychiatry, 59(2): 82–3.