PP-012 https://doi.org/10.5080/61upk.ozt510

CLINICAL DETERIORATION AFTER ELECTROCONVULSIVE THERAPY: NEUROLEPTIC MALIGNANT SYNDROME OR INFECTION?

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OBJECTIVE: Neuroleptic malignant syndrome (NMS) is rare but potentially life-threatening condition associated with antipsychotic use and characterized by hyperthermia, muscle rigidity, altered mental status, autonomic instability.

Electroconvulsive therapy (ECT) is a safe and effective treatment option for severe psychotic symptoms, catatonia, and treatment-resistant conditions. However; fever, elevated creatine kinase (CK) levels, transient alterations in consciousness may occur after ECT, complicating the differential diagnosis between NMS and infectious etiologies. This case discusses whether clinical deterioration following ECT was attributable to NMS or secondary to an infectious process.

CASE: (The patient consent must be provided and specified with appropriate terms). 61 years old female patient with schizoaffective disorder was hospitalized due to one week of refusal of oral intake, inability to ambulate, aggressive behavior symptoms. Following intramuscular haloperidol administration, her CK level was 2229 U/L and emergency ECT was initiated under olanzapine treatment. After the first ECT session, CK decreased to 141 U/L, with marked clinical improvement.

After the second ECT session, the patient developed fever (37.8°C), altered mental status, autonomic instability, elevated CK levels (2778 U/L), raising suspicion for NMS. Due to clinical deterioration and unstable vital signs, patient was admitted to the ICU, where Influenza A infection was detected and antiviral therapy was initiated. During follow-up, CK levels increased to 6340 U/L. Given persistent clinical suspicion of NMS, bromocriptine treatment was initiated, resulting in a gradual decline in CK levels.

After clinical stabilization, the patient was transferred back to the psychiatric ward; aripiprazole was initiated, ECT was continued. Vital signs normalized, CK levels decreased to 485 U/L, oral intake resumed, improvement in psychiatric symptoms was observed. (Informed consent was obtained.)

DISCUSSION: This case demonstrates that fever, CK elevation following ECT don't necessarily indicate NMS and that infectious causes must be excluded. It highlights the dynamic nature of NMS diagnosis and underscores the importance of early treatment initiation in evolving or atypical presentations.

Keywords: Neuroleptic Malignant Syndrome (NMS), Schizoaffective Disorder, Electroconvulsive Therapy (ECT), catatonia, infection, bromocriptine