





began to regress. She was able to walk so we removed the urinary catheter. She was able to talk and eat her meal by her husband's help. On the fourth day of her hospitalization her CPK level was decreased from 7417 to 4829. Her liver function tests also decreased. Her orientation became normal, deviation in left eye regressed in the third day of the treatment. She was able to talk to her husband and did not describe auditory or visual hallucinations. On the seventh day of drug interruption, her clozapine dose was restarted as 25 mg per day. Her control EEG was normal. Her liver function tests became normal in the end of first week of hospitalization. Her vitals were stable. Her intravenous hydration was stopped. The dose of clozapine 25 mg was increased every three days. We discharged her in the 14<sup>th</sup> day of hospitalization with dose of clozapine 75 mg/day because the patient her family wanted to continue the treatment as an outpatient. After discharge, the patient continued regular follow-up visits at the outpatient clinic and still continues clozapine 400 mg/day.

A few reports have documented emergence of delirium associated with use of clozapine (3). Even if clozapine treatment is interrupted for only a short time it is important that the 'new' course begins with a low dosage and is increased very cautiously until it reaches the former, tolerated level. Clozapine alone or in combination with other agents have been observed as a causative factor for delirium (7). There are several cases that of patients receiving clozapine treatment, delirium developed during slow titration and vitality was stable and also there was no pathology in liver function tests of those patients (6,8). Although a clozapine-version of a neuroleptic malignant syndrome (NMS) could not be ruled out. Neuroleptic malignant syndrome (NMS) is a rare, idiosyncratic, but life-threatening adverse reaction associated with the use of antipsychotic drugs. The motor and behavioral symptoms include muscular rigidity and dystonia, akinesia, mutism, obtundation, and agitation. The autonomic symptoms include hyperthermia, diaphoresis, and increase pulse and blood pressure. Laboratory findings include an increased white blood cell count and increased levels of creatinine phosphokinase, liver enzymes, plasma myoglobine, and myoglobinuria, occasionally associated with renal failure (9). The complication of the diagnosis in our case was that the patient met all NMS criteria except hyperthermia as reflected in Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition [DSM-5] criteria) (10). That's why we ruled out NMS according to DSM-5 criteria. On the other hand, what is confusing in our case was that our patient met the criteria of Levenson for the diagnosis (11). Our patient presented with two Levenson's major criteria except fever and met all the minor criteria.

It was also thought that the patient may have an atypical NMS in the diagnosis due to autonomic instability other than fever, liver enzymes and CPK elevation. When the literature is analyzed, it was seen that atypical NMS cases without fever were reported related to atypical antipsychotics such as aripiprazole and olanzapine (12,13). Nevertheless, her EEG was not match with the EEG that usually reports in patients with NMS. A non-generalized slowing on an EEG might be reported in patient with NMS (14). It was observed that there was an atypical NMS case reported with clozapine, and this case was also afebrile, and it was reported that the developing delirium was associated with NMS (15).

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In conclusion; the delirium may have appeared due to NMS. Since the delirium due to clozapine is rarely reported, clinicians will be able to recognize this condition and investigate its causes, which will help create structured treatment options.

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