Olanzapine-Induced Symptomatic Hyponatremia and Delayed-onset Rhabdomyolysis: A Case Report

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**Abstract**

**Introduction:** Olanzapine is a thienobenzodiazepine classified as an atypical or second-generation antipsychotic agent. It is effectively use for the treatment bipolar disorder and schizophrenia. A known complication of olanzapine related to hyponatremia and rhabdomyolysis is rare but had been reported few times.

**Case report:** A 29-year-old man with schizophrenia was taking olanzapine 15mg daily. Presented to emergency department with altered mental status and episode of apyretic generalized tonic-clonic movement. Laboratory investigation revealed serum sodium of 113mmol/L, urine sodium of 57 mmol/L, serum osmolality of 235 mOsm/kg, urine osmolality of 285 mOsm/kg and high-level of creatinine kinase (CK) measured at 4056 U/L. On suspicion of olanzapine contribution to rhabdomyolysis, Olanzapine was withheld initially at emergency department level. Olanzapine-induced symptomatic hyponatremia and delayed-onset rhabdomyolysis was diagnosed at emergency department (ED) level. However, throughout the admission, olanzapine was restarted back by primary team. Patient was persistently being aggressive and agitated in ward, requiring sedation and physical restraint. Subsequently, termination of olanzapine was decided after CK level rise dramatically 123,440 U/L and was replaced with amisulpride 100mg PO.Following hydration, CK level decreasing and patient general condition improving markedly. He was discharged after four days treated as in patient.

**Discussion:** Adverse effect of olanzapine is mostly reversible but it's crucial to suspect and recognize them early, especially in psychiatric patients taking atypical antipsychotic medications. In this case, hyponatremia induced by olanzapine was likely due to syndrome of inappropriate antidiuretic hormone (SIADH) secretion. Explanation on rhabdomyolysis is however remain unclear. This case was relatable with another case report by Dr Jun Hua Bowen Lim who reported a patient who is stable and treated with olanzapine and subsequently developed acute delay rhabdomyolysis without any identifiable triggering factor. Both cases might be drug-related condition that triggered the presentation of the patient in emergency department setting**.**

**Conclusion:** Patient with a long-term use of olanzapine treatment, drug-induced hyponatremia secondary to SIADH and delay-onset rhabdomyolysis should be considered as a diagnosis. Regular blood monitoring might be required for early intervention. Early diagnosis with a correct timely intervention will improve and fasten the recovery of patient during inward management.

**Keyword:** Olanzapine, Delayed-onset rhabdomyolysis, SIADH