

## Polydipsia Secondary to Quetiapine Use: A Case Report



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To the Editor:

Polydipsia is characterized by excessive water drinking. It has been related to psychiatric conditions such as schizophrenia, cognitive impairments, and neurological disorders such as brain tumors. Excessive drinking may lead to hyponatremia, nausea, vomiting, delirium, ataxia, seizures, coma, and even death<sup>1</sup>. Here, we present a case of polydipsia secondary to quetiapine use in a patient with schizophrenia.

JVO, 20 years old, male, single, diagnosed with schizophrenia according to the DSM-IV criteria for about six years ago. The patient was under pharmacological treatment with quetiapine in increasing doses, reaching 800 mg/day. One week later, he presented at the psychiatric emergency room with nausea, vomiting, confusion, and disorientation. Psychiatric symptoms included blunt affect, auditory hallucinations (voices commenting on patient's actions and conversing with one another), and persecutory delusions. In fact, the patient was persecutory with near relatives and daily activities were limited by his psychotic behaviors. Increased water intake was observed and diuresis reached approximately 12 liters/day. Complementary tests showed hyponatremia with a serum sodium level of 105 mmol/L (135-145 mmol/L). All other laboratory tests and neuroimaging studies were within normal range. Other possible etiologies of polydipsia, such as diabetes mellitus, diabetes insipidus, syndrome of inappropriate antidiuretic hormone secretion

(SIADH), and thyroid or adrenal dysfunctions were excluded. Psychogenic polydipsia was a possible differential diagnosis, however we could observe a strong temporal association between polydipsia symptoms intensity and quetiapine use. Furthermore, with quetiapine discontinuation, clinical remission of polydipsia symptoms with normalization of complementary laboratory tests were obtained. The patient has never manifested such behavior before quetiapine use. Initial treatment was 1,000 ml intravenous infusion of sodium chloride 0.9% and water intake restriction to one liter per 24 hours. Quetiapine was replaced by risperidone. Patient showed improvement with normalization of serum sodium levels and presented with clinical improvement during the next three days.

In polydipsia the excessive drinking of water reduces plasma osmolarity<sup>2</sup>. Considering the use of antipsychotic drugs inducing polydipsia, it has been previously hypothesized that the use of neuroleptics may increase vasopressin (ADH) secretion, therefore inducing water retention<sup>3</sup>. Another theoretical mechanism could be based on possible anticholinergic effects inherent to antipsychotics that would induce sensation of thirst<sup>4</sup>. Regarding the specific use of quetiapine, there has been only one case in medical literature reporting quetiapine inducing hyponatremia. However, the metabolic imbalance was due to syndrome of inappropriate secretion of antidiuretic hormone rather than secondary to polydipsia<sup>5</sup>.

In this present case, we report and highlight

polydipsia following quetiapine use in a schizophrenia patient. This is, to the best of our knowledge, the first case report of polydipsia

associated with quetiapine.

**Keywords:** *quetiapine, polydipsia, side effect*

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*Declaration of interest:*

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