

Angioedema as a Rare Adverse Effect of Olanzapine

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Dear Editor,

Angioedema is the painless, nonpruritic, nonpitting, and well-circumscribed swelling of the deep dermal and subcutaneous tissues (1) and usually presents on the face, tongue, extremities, genitals, and rarely in the larynx (2). Angioedema has been associated with antipsychotics like risperidone (3, 4), olanzapine (5), clozapine (1), and ziprasidone (2). Here we describe a patient who developed angioedema following treatment with olanzapine.

A 47-year-old man with a history of bipolar disorder was admitted to our clinic with the diagnosis of psychotic manic episode. For the previous 2 weeks, he had shown symptoms of irritability, reduced sleep, racing thoughts, grandiosity, excessive money spending, and walking endlessly. His physical and neurologic examination was unremarkable. His psychiatric evaluation revealed megalomaniac and mystic delusions, rapid speech, and flight of ideas. Laboratory examinations, including liver, renal, and thyroid function, blood cell count, and toxicology tests were within the

normal ranges. The patient reported an irregular use of lithium carbonate 1200mg/day and quetiapine 800mg/day during the last month before admission. The blood level of lithium carbonate on the first day of admission was 0.26mEq/L. The medical history of the patient was unremarkable, and he did not report allergic reactions to any drug or food. After admission, treatment with intramuscular injections of olanzapine 20mg/day and lithium carbonate 900mg/day was started. Four days later, he developed painless, nonpruritic swelling on the face. On physical examination, the periorbital edema was remarkable, but his vital signs were normal. Olanzapine therapy was withdrawn and repeated laboratory examinations were normal. Olanzapine-induced angioedema was diagnosed, and was treated with a single injection of methylprednisolone 40mg and pheniramine 22.7mg/day. The angioedema was completely resolved within 1 week and the patient was started on risperidone 6mg/day. During the follow-up, manic symptoms and psychosis significantly improved, and he remained well without any recurrence of angioedema.

Angioedema results from increased vascular permeability induced by inflammatory mediators. The sign may develop because of various underlying causes, including hereditary, acquired, allergic, and drug-induced mechanisms (1). Occurrence of angioedema with introduction of a new drug (olanzapine) disappearance of skin symptoms with discontinuation of olanzapine, and response to steroids and antihistamines, suggest an allergic form of angioedema due to olanzapine. In a postmarketing

surveillance study of olanzapine, angioedema was reported in only two patients (5). Because of no known drug interactions between olanzapine and lithium carbonate, angioedema due to this combination is highly unlikely.

Adverse events should be closely monitored in patients receiving antipsychotics. A prompt diagnosis and early treatment with drug withdrawal can prevent life-threatening complications secondary to drug-induced angioedema.

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