A Case-report of Olanzapine-induced Urticaria

Dear Editor,

Cutaneous adverse reactions constitute the most frequent form of pharmacologic adverse events.[1] Among various psychiatric pharmacotherapies, conventional and atypical antipsychotics are associated with the lowest incidence of cutaneous adverse effects.[2] However, these medications are commonly used, and it is crucial to recognize cutaneous adverse effects as they may limit treatment compliance and may sometimes be severe.[1]

Urticaria is the second most common cutaneous adverse drug reaction, followed by maculopapular rash.[3,4] Although urticarial reactions can potentially occur with any antipsychotic agent, the available literature is limited to several reports.[3] Data on olanzapine-induced cutaneous reactions, as compared to other antipsychotics, are even scarcer.[5,6]

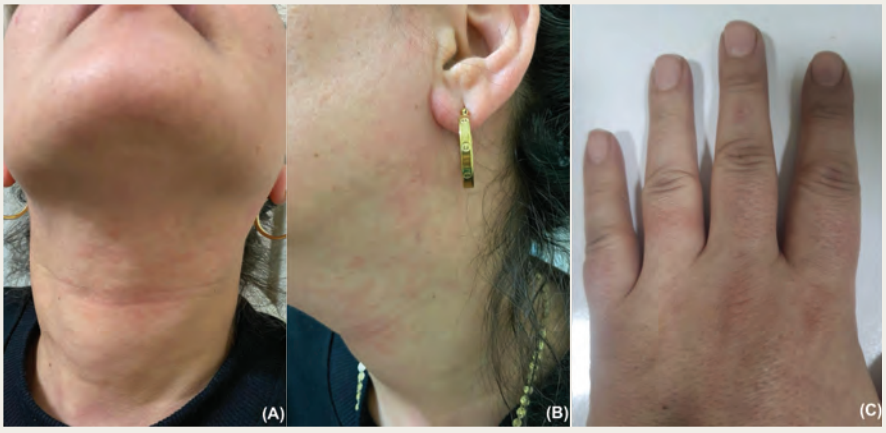
In this report, we describe a patient with panic disorder who developed an urticarial drug reaction to olanzapine treatment. We aimed to raise awareness about this rare possible reaction to olanzapine and discuss its evaluation and management.

Case Report

A 39-year-old woman presented with new-onset panic attacks and a fear of death, ultimately receiving a diagnosis of panic disorder in November 2023. She did not have bipolar illness, depression, or delusions at any time. She had no other systemic illnesses, including a history of atopy, asthma, or urticaria. Upon psychiatric examination, she exhibited decreased self-care, extremely severe anxiety, and increased psychomotor activity. The patient received paroxetine 30 mg/day and propranolol 40 mg/day. Alprazolam 2 mg/day was added. Although anxiolytics (alprazolam) were attempted to manage her severe anxiety, they proved to be inadequate. Subsequently, due to treatment resistance, olanzapine 2.5 mg/day was prescribed in February 2024 in line with recent literature.[7] Within two hours of the initiation of 1.25 mg/day olanzapine, the patient developed erythematous and edematous papules on the head, neck, and dorsum of the fingers. The patient gave written informed consent to publish images (**Figure 1**). Olanzapine treatment was stopped, and the rash spontaneously resolved within two days. In March 2024, a dermatology consultation was conducted by a specialist and an oral provocation test with a quarter dose of olanzapine was performed after informed consent was obtained and under medical surveillance in case of an emergency. Urticaria of the same severity re-occurred within one hour. Cardiovascular parameters were stable. There were no respiratory symptoms or fever. The reaction subsided spontaneously after three days. Routine blood tests, including complete blood count and serum biochemistry, were within normal limits. The patient was diagnosed with olanzapine-induced urticaria due to the timing and morphology of the reaction, along with a positive oral drug re-challenge. Propranolol dosage was increased to 80 mg/day, which led to disease remission.

FIGURE 1.

Urticarial Rash Induced by Olanzapine on the Anterior Neck (A), Preauricular Region (B), and Dorsum of the Fingers (C).



Discussion

We presented a patient with panic disorder who developed a urticarial reaction to olanzapine. She did not have other conditions that would trigger acute urticaria, and an oral provocation test confirmed the diagnosis. Of note, patients with various psychiatric disorders, including panic disorder, have a high rate of concomitant skin diseases. However, the possibility of a cutaneous drug reaction must always be kept in mind in the differential diagnosis.[8]

With an estimated incidence of 5%, cutaneous reactions to antipsychotics include pigmentation changes, photosensitivity, and onycholysis.[1,3] Olanzapine is a second-generation antipsychotic that can be used in treatment-resistant panic disorder.[7] Common adverse effects of olanzapine include weight gain and somnolence.[9] Cutaneous side effects are rare but can be alarming to both patients and physicians. Olanzapine was reported to cause pruritus, photosensitivity, urticaria, fixed drug eruption, leukocytoclastic vasculitis, acute generalized exanthematous pustulosis, Drug Reaction with Eosinophilia and Systemic Symptoms syndrome, and anaphylactic shock.[3,6,9] Most cases were diagnosed clinically, mainly due to the timing of the given medication.[9] Skin biopsy was not possible due to underlying psychiatric disorders in some cases.[5] Our case is important in that an oral provocation test confirmed the diagnosis of cutaneous reaction induced by olanzapine. According to the Naranjo Adverse Drug

Reaction Probability Scale, the reaction was 9 (definite).[10]

Urticarial drug reactions occur within minutes to 36 hours of drug intake. This onset is rapid compared to other forms of cutaneous drug reactions. Drug-induced urticaria can occur both after first exposure as well as after many previously well-tolerated exposures. Clinically, the appearance of drug-induced erythematous, pruritic wheals of urticaria is indistinguishable from that of other causes of urticaria, such as infections. Drug-induced urticaria can also be associated with anaphylaxis, angioedema, and serum sickness. Evaluation of respiratory and cardiovascular functions is necessary to differentiate simple urticaria from anaphylaxis. The oral provocation test performed in the convalescence period is the most reliable method to diagnose drug-induced urticaria in patients who have not had life-threatening reactions.[4]

Most adverse cutaneous reactions induced by psychotropics, including our case, are benign and self-limited upon discontinuation of the culprit drug.[1,6] However, all patients with skin eruptions should be evaluated for symptoms of severe cutaneous adverse events, including fever, lymphadenopathy, erythrodermia, facial edema, blisters, respiratory symptoms, hypotension, mucosa, and internal organ involvement.[3,6] The best approach in treatment is the prompt withdrawal of the causative agent.[3] Oral provocation tests can be performed in patients with mild reactions after recovery.

Data Availability Statement

The data of the study can be shared on demand.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Declaration Regarding the use of Generative AI

Nil. We assume full responsibility for the entire content of the manuscript.

Ethical Statement

We conducted our research according to Declaration of Helsinki and obtained the approval of institutional ethics committee.

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