

Occupational allergic contact dermatitis to olanzapine

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Case Report

A 51-year-old atopic male process operator at a pharmaceutical plant presented with two episodes of eyelid and hand dermatitis, which spread to his arm. The dermatitis responded on each occasion to topical clobetasol propionate 0.05% ointment. He worked in the same pharmaceutical plant for 16 years and worked on the production of olanzapine for 2 years prior to presentation. He gave a history of allergy to thiuram in rubber gloves diagnosed by patch testing 20 years earlier. He avoided thiuram containing gloves from that time.

He was patch tested with the British Contact Dermatitis Society baseline series, rubber series (Chemotechnique Diagnostics) and olanzapine 1%, 0.1% and 0.01% in pet. Allergens were applied using Finn Chambers® on Scanpor® tape (Epitest Ltd, Oy Tuusula, Finland). Patches remained in place for 2 days and readings were done at D2 and D4. He had positive reactions to olanzapine at 1%, thiuram mix and tetraethylthiuram disulfide. Patch tests to all concentrations of olanzapine in 10 control patients were negative.

Discussion

Olanzapine (Zyprexa®) is an atypical antipsychotic approved for the treatment of schizophrenia and bipolar affective disorder. It is the most widely used antipsychotic with sales of olanzapine in 2008 approaching \$2.2 billions in the United States alone, and \$4.7 billions worldwide (1). Reported olanzapine-induced cutaneous eruptions, resulting from systemic exposure to olanzapine, include eruptive and tuberous xanthomas, vasculitis, hyperpigmentation and generalized pustulosis (2–5). Although the manufacturers' safety data sheet states the potential for contact sensitization, we are aware of only one previous report of occupational dermatitis (6). Walsh et al. presented a report of occupational allergic contact dermatitis to olanzapine in two patients working at the same pharmaceutical plant (6). Both subjects had dermatitis affecting the face, and the second subject also had dermatitis affecting his hands and neck. They had positive patch tests to olanzapine powder 0.1% in pet. The authors highlight the importance of personal protective equipment (PPE), reporting that masks were shared by workers at the plant and that PPE was not worn when changing bags containing raw materials. We think that this may also have been a factor in our case and we identified a number of production stages leading to potential exposure: weighing out the drug, tying up container bags and removing the product by hand.

This case serves to further illustrate the potential for contact allergic dermatitis with olanzapine and to highlight the importance of educating employees to the proper use of protective equipment in the workplace.

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