

Occupational airborne contact dermatitis caused by pantoprazole

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Introduction

Pantoprazole is a proton pump inhibitor, a member of the benzimidazole family. It is used for the treatment of erosion and ulceration of the oesophagus caused by gastro-oesophageal reflux disease, gastric hypersecretion, *Helicobacter pylori* gastrointestinal tract infection, and Zollinger–Ellison syndrome.

We present a case of airborne contact dermatitis caused by this drug in the setting of the pharmaceutical industry.

Case Report

A 33-year-old atopic male was referred to our clinic with a 7-month history of facial and eyelid dermatitis. He had worked as a machine operator in a pharmaceutical factory for the 6 years prior to presentation. He used latex gloves, mask and goggles intermittently as protection. The dermatitis resolved with exfoliation and hyperpigmentation of the eyelids. He described eight episodes, each lasting for a week, which resolved after treatment with antihistamines and a week off work. He suspected pantoprazole powder to be the offending agent. No other workers were affected.

Patch tests were performed with the European baseline and cosmetic series (Chemotechnique Diagnostics, Malmö, Sweden) applied in Finn Chambers® (Epitest, Tuusula, Finland) on Scanpor® (Norgesplaster A/S, Venesla, Norway) and with the patient's own samples of pure pantoprazole powder (1%, 5% and 10% pet.). We also patch tested him with omeprazole. The samples were

properly diluted according to the literature (1–3). The tests were applied to the upper part of the back and left for 2 days. Tests were read on D2 and D4. The reactions were scored according to International Contact Dermatitis Research Group criteria. Readings at D2 were: omeprazole 10%, +; omeprazole 5%, ±; pantoprazole 10%, +; and pantoprazole 5%, +. At D4, the readings were: omeprazole 10%, +; omeprazole 5%, +; pantoprazole 10%, ++; and pantoprazole 5%, ++. The patient also reacted to nickel. The same patch test concentrations used with 10 controls gave negative results. The nickel reaction was interpreted as being of past relevance.

Two months of avoidance of working on the pantoprazole-manufacturing line resulted in no further outbreaks.

Discussion

Pantoprazole sodium is a proton pump inhibitor that covalently binds to the H⁺/K⁺-ATPase enzyme system at the secretory surface of the gastric parietal cell. This action suppresses the final step in gastric acid production, and leads to inhibition of both basal and stimulated acid secretion. Airborne occupational contact dermatitis caused by omeprazole, a benzimidazole, has been reported (1). Allergic contact dermatitis caused by lansoprazole, another member of the benzimidazole family, has also been reported in the setting of the pharmaceutical industry (2).

Pantoprazole is a member of a highly sensitizing group of chemicals, along with other proton pump inhibitors, such as omeprazole and rabeprazole (4).

Consequently, the importance of protective equipment, including overalls, masks, and gloves, for pharmaceutical workers should be emphasized (1). This is the first report of occupational airborne contact dermatitis caused by pantoprazole.

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