

**Occupational allergic
contact dermatitis to
a non-ionic iodinated
contrast medium
containing iomeprol**

Contact Dermatitis 2008: 59: 252–253

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Key words: allergic contact dermatitis;
iodinated contrast medium; iomeprol.

Iomeprol is the active principle in Iomeron[®], a monomeric and water-soluble non-ionic, injectable iodinated contrast medium solution. Intravenous injection of iodinated contrast media is known to be able to cause immediate

and delayed reactions that may involve the skin, respiratory system, and gastroenteric tract (1). We report the first case of allergic contact dermatitis to iomeprol (Iomeron) in a radiology technician.

Case Report

A 40-year-old woman radiology technician, who had never personally undergone radiological examinations with contrast media, presented with a history of recurrent eczema localized on her face and neck. She had a history suggestive of nickel contact allergy.

Patch tests with both the baseline Italian Society of Allergological, Occupational and Environmental Dermatology (SIDAPA) and our cosmetics series produced reactions to nickel sulfate, cobalt chloride, formaldehyde, and quaternium-15. Despite avoidance of these, there was no resolution of the dermatitis, which became worse during periods at work but with a tendency towards improvement when she was away from work. Therefore, we patch tested her with the radiological contrast medium used in her department (Iomeron® injectable solution; Bracco, Milan, Italy) at a concentration of 10% aq. as well as the various product components: iomeprol (obtained by chromatographic separation of Iomeron) (2) at concentrations of 1%, 2%, and 5% aq., trometamol at dilutions 0.1%, 0.5%, and 1% aq., and iodine at dilutions 0.5% and 0.1% aq. Positive reactions (+++) were obtained at D2 and D4 to Iomeron 10% aq. and to iomeprol at all tested concentrations. Patch tests with iomeprol 5% aq. in five controls were negative. The dermatitis rapidly resolved after the patient avoided touching her face with gloves contaminated by Iomeron. A diagnosis of occupational allergic contact dermatitis to iomeprol was made.

Discussion

Reactions to contrast media are common and estimated to occur in 13% of patients receiving iodinated contrast medium and 3% of subjects receiving non-iodinated media (3). The most common cutaneous reactions are either immediate (urticaria and angioedema) or a delayed reaction (maculopapular exanthema,

erythema multiforme, Stevens-Johnson syndrome, vasculitis, and hypersensitivity syndrome) (4, 5). Although skin tests have been used to diagnose skin eruptions induced by radiological contrast media, their validity is controversial (6–8). Iomeprol can provoke maculopapular reactions as well as a fixed drug-induced erythema (9) and systemic allergic dermatitis (10). Iomeprol has been suggested to be responsible for such skin reactions by patch tests with the contrast medium 'as is' (6, 10).

Herein, we report the case of a radiology technician who developed an exogenous occupational dermatitis of the face due to contact with the contrast medium through contaminated gloves. Patch tests showed that iomeprol was the culprit component, indicating that even occasional contact with this substance places subjects with occupational exposure at risk of sensitization. Operators in the health field who handle contrast media should, therefore, be made aware of the importance of adopting adequate protective measures and not touching exposed skin areas with contaminated gloves. In cases of otherwise unexplained exogenous eczematous eruptions, these subjects should be patch tested with the contrast media they use professionally.

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