

Short Communication

Allergic contact dermatitis from gold

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Millions wear jewellery or have dental restorations made of gold without any reaction of the skin and/or the oral mucosa, respectively. Therefore, allergic contact dermatitis or stomatitis to gold alloys still seems to be rare (1-4). On the other hand, recently published papers report more frequent allergic reactions to gold salts in consecutively patch-tested patients than expected (5-7).

Case Report

A 34-year-old woman was referred by her dentist with suspected mercury allergy. 1 month ago, all her dental fillings of mercuric amalgam had been redone. 1 week later, redness of the tongue and erosions of the oral mucosa had occurred, so that the new fillings had had to be removed. She also reported itching in contact areas of gold jewellery (earrings, wedding ring, necklace and bracelet) for the last 2 years. With cessation of contact, such dermatitis improved, but relapsed on re-exposure. She had never received systemic gold therapy and had no gold dental fillings. Clinically, there had been erythema, papules, infiltration, slight erosions and scabs on both sides of the neck and the collar bone, as well as around the ring finger of the left hand. The oral mucosa and the skin were currently free from lesions.

Patch testing was performed with the standard series, denture materials, fragrances, copper-II-sulfate and cadmium chloride (all Hermal, Germany), using Finn Chambers on Scanpor tape. Patches were removed after 1 day and the tests read according to GCDRG criteria. Positive tests are listed in Table 1. The reaction to gold sodium thiosulfate was unequivocal and crescendo-type.

Discussion

Patch test results confirmed allergy to gold and mercury, as suspected. Gold sodium thiosulfate is the most frequently used patch test to detect gold allergy (3-5, 8-10), because of its lack of irritancy. A negative reaction to potassium dicyanoaurate does not exclude gold allergy, because of its low test concentration (5), while higher concentrations may give irritant reactions. Hypersensitivity to gold may also be combined with hypersensitivity to other metals, such as mercury, nickel or palladium (7, 8, 11, 12).

In our patient, the allergy to mercury as well as to gold was of clinical relevance, and problems therefore arose concerning dental restorations in future. Silver-palladium alloy, resin or ceramics had to be considered, though palladium (12-14) and resin both have sensitization potential of their own, as well as resin and ceramics exhibiting some disadvantages regarding processing and durability. We recommended ceramics in this particular patient.

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Table 1. Results of patch testing

Allergens	%	Vehicle	D1	D2	D3	D4
gold sodium thiosulfate	0.5	pet.	+	++	++	+++
potassium dicyanoaurate	0.002	aq.	0	0	0	0
ammoniated mercuric chloride	1	pet.	0	(+)	(+)	++
mercury amalgam	5	pet.	0	(+)	(+)	+
amalgam components (silver, copper, tin)	20	pet.	0	0	0	0
hydroxycitronellal	1	pet.	0	+	+	+

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