

## Letter to the Editor

### Patch tests with beryllium salts

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Dear Sir

We would like to comment on the interesting article of Toledo et al. Contact allergy to beryllium chloride: report of 12 cases (1).

The authors present the data of 62 patients who were tested with a special metal series, including beryllium chloride 1% pet. Twelve (19.3%) had a positive test reaction to beryllium chloride, 3 were positive within the reading times of D2 and D4 (4.8%), 6 (9.6%) were positive between D7 and D10, and 3 (4.8%) were positive between D10 and D20. Six of the 9 patients with late-occurring positive patch test reactions were retested, and all were then positive between D2 and D4 (1).

In our clinic, we have also tested an extended metal series including beryllium sulfate 1% pet. for several years. The tests were performed in IQ Chambers™, and applied for 2 days on the upper back. Readings were taken on D2 and on D3 or D4. Evaluation criteria were as recommended by the International Contact Dermatitis Research Group. Indications were suspected contact allergies to dental or orthopaedic material or contact dermatitis resulting from occupational exposure to metals. From a total of 87 patients (56 females) tested with the metal series, 3 patients (2.61%) (a 15-year-old male with dental braces, a 55-year-old female with dental crowns, and a 53-year-old male with berylliosis resulting from occupational exposure) were positive for beryllium sulfate. The female patient had multiple contact sensitizations to different metals. Except for the occupational case, no relevance could be established. One female patient, who was initially negative for beryllium, was retested with the metal series 2 years later, and showed sensitization to beryllium sulfate on D2 and D3. She was probably sensitized by the previous patch test.

As is emphasized by Toledo et al., in cases with a high suspicion of beryllium contact, testing with this metal is justified. However, their data clearly indicate that active sensitization may be quite frequent. This is supported by the observation that patients with chronic beryllium disease, an occupational lung disorder mimicking sarcoidosis, may also be sensitized through skin exposure (2, 3). For this reason, the lymphocyte proliferation test has been established as a sensitive and specific diagnostic tool for this condition (4).

We agree with the authors that patients who are tested with beryllium should have late readings. The difference between our results may arise from the different beryllium salts tested and the fact that we did not routinely perform late readings. In the literature, different salts, concentrations and vehicles have been used, such as beryllium fluoride 1%, 0.1% and 0.001% aqua, beryllium chloride 2% aqua, beryllium chloride 1% aqua or pet., beryllium nitrate 0.5% to 1% aqua, and beryllium sulfate 1% pet. (5, 6).

We would, however, strongly advise against testing beryllium salts routinely in patients with a low suspicion of exposure. Its sensitization potential appears to be much too high to justify its use in a screening metal series. We have stopped testing with beryllium in patients with a low probability of exposure. Analysis of dental alloys (sliver test) for metals, for example by energy-dispersive X-ray spectroscopy, is a non-invasive procedure (7), and does not put the patient at risk. Alternatively, a lymphocyte proliferation assay could be performed to prove sensitization (4, 8).

Sincerely,

**Andreas J. Bircher**

Allergy Unit Department of Dermatology, University Hospital,  
Petersgraben 4, CH-4031 Basel, Switzerland

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