

CONTACT POINT

Occupational allergic contact dermatitis caused by nickel in embroidery needles

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Allergic contact dermatitis caused by nickel in products designed to be used or worn close to the skin is still seen in the EU, despite legislation from 1994 (and earlier in some member states),¹ which was subsumed into the REACH legislation of 2009.²

CASE REPORT

A 41-year-old female presented with a 6-year history of a painful dermatitis affecting the fingertips of both hands. The eruption adversely affected her ability to run her own curtain-making business. The rash had been refractory to treatment with super-potent corticosteroids, methotrexate, and acitretin. Treatment with alitretinoin was considered. Examination showed psoriasiform dermatitis affecting the finger pulps exclusively on the first and second finger pulps of each hand, and worse on the dominant side (Figure 1).



FIGURE 1 Psoriasiform dermatitis with marked fissuring on fingertips prior to testing

Given the possibility of irritant or allergic contact dermatitis, patch testing was performed with an extended European baseline series as well as fragrance chemicals and textile dyes, by the use of Finn Chambers on Scanpor tape (SmartPractice, Phoenix, Arizona). The duration of occlusion was 2 days, and readings were performed on day (D) 3 and D5 according to ICDRG criteria. Readings were entirely negative at the end of the test period, apart from a + reaction to nickel on D3, developing into a ++ reaction on D5. Given the patient's exposure to needles at work, and given the distribution of the dermatitis, dimethylglyoxime tests (Chemo Nickel Test; Chemotechnique Diagnostics, Vellinge, Sweden) were performed on her own embroidery needles. Testing showed unequivocally positive results for nickel release, hence confirming the current occupational relevance of the patch test reaction. Avoidance of the needles resulted in a marked improvement of the fingers within 4 weeks (Figure 2), and the fingers were disease-free at follow-up.



FIGURE 2 Improvement of the dermatitis within 4 weeks of avoiding nickel-containing needles

4 months after allergen avoidance. Our patient obtained nickel-free embroidery needles, but found them unsuitable for her commercial activity. She now wears a rubber finger stall to avoid skin contact with the nickel-containing needles.

DISCUSSION

It is disappointing that, despite relevant legislation being in place for the last 24 years, nickel is still sometimes responsible for occupational allergic contact dermatitis. The needles were bought and used in the United Kingdom (still a member of the EU as of 2018). We hope that other clinicians will perform dimethylglyoxime testing on suspect needles in allergic individuals.

Conflict of interest

The authors declare no potential conflict of interests.

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