

Short Communications

Contact urticaria and anaphylactoid reaction from cornstarch surgical glove powder

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For 4 years, a 29-year-old obstetrician had frequently suffered from erythema and oedema of the dorsa of the hands, often associated with oedema of the eyelids, rhinitis, conjunctivitis and asthma attacks. The patient associated these symptoms with wearing latex surgical gloves containing an absorbable dusting powder made from processed cornstarch (maize starch). She found that weals occurred after 15-20 min at sites of contact and angioneurotic oedema after 1-2 h.

She had previously had 2 episodes of anaphylaxis, one after the administration of antitetanus serum and the other after taking the analgesic buprenorphine chloride for earing dermatitis. Her mother and a brother had urticaria and the latter also seasonal rhinitis and conjunctivitis.

Patch testing with standard allergens of the Gruppo Italiano Ricerca Dermatiti da Contatto e Ambientali (GIRDCA) (1), the cornstarch powder, and 1 cm² of unwashed and washed latex glove was negative after 30 and 120 min. However, a positive reaction to nickel sulphate and urticarial-looking reactions to unwashed surgical glove and cornstarch powder were seen after 48 and 72 h. The powder test in 20 controls was negative.

Usage tests with an unwashed right-hand glove and a washed left-hand one, worn for 20 min, caused itching, erythema and oedema of the dorsa of the hands, the right one more than the left.

As an inhalation test, the patient opened and removed several packets of the powdered surgical gloves with her hands protected by polyethylene gloves. Eyelid oedema was seen after 15 min and dyspnoea after 90 min.

Total serum IgE (22 U/ml) was within the normal range but slightly raised after the inhalation test (37 U/ml). The RAST with cereals (oats, barley,

cornstarch, soya flour, gluten) and prick tests with common inhalants were negative.

Contact urticaria from surgical gloves has previously been attributed to latex chemicals (2) or to chemical accelerators of vulcanization (3-4). In our patient, sensitivity to rubber haptens was not seen; instead the cause was absorbable cornstarch powder, as more recently reported (5-6). In one of these reports (5), only contact urticaria was observed, while in the other (6), there was also an anaphylactoid reaction, as in our patient, who presented with 4th-stage contact urticaria (7). This was probably due to an IgE-mediated reaction, though the RAST with maize was negative. The reason for this could be the variety of maize used to determine specific IgE-antibodies being different from that used to make the cornstarch powder.

References

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