

Short Communication

Contact urticaria from benzyl alcohol presenting as intolerance to saline soaks

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A patient with unresponsive stasis dermatitis gave a long list of medicament allergies on her initial visit, and topped it off with a history of breaking out to moist saline soaks during a recent hospitalization. Since bacteriostatic saline contains benzyl alcohol as a preservative, she was patch tested particularly to benzyl alcohol 1% pet.

Case Report

A 53-year-old retired missionary presented with bilateral stasis dermatitis. She also had another rash suggesting clothing sensitivity. There was a history of immediate sensitivities to a wide variety of medicaments, including iodides, Silvadene, betamethasone, cephalexin, thimerosal, penicillin, and trazodone. She said that she knew that that she was allergic to Benadryl, Neosporin Plus (which contains pramoxine), and Caladryl. She also was said to be allergic to benzoyl peroxide, doxycycline, phenylmercuric acetate, thyroid, trimethoprim/sulfamethoxazole, chlorhexidine, a generic petrolatum, nickel, rhodium, and a brand of gauze dressing. She had also reacted to elastic hose. Because of her numerous allergies by history, the panel of tests on the 1st visit was limited and she was observed for 1 h after the tests were applied.

About 1 h after she had left the office, she called saying that she had redness and swelling where the benzyl alcohol test had been applied. She was told to remove that patch test (which had been placed apart from other tests) and report on the amount of swelling, and she was immediately to go to the emergency room if she became light-headed or began to wheeze.

She returned the following day with a wheal about 10 cm in diameter where the benzyl alcohol had been applied. There were no epidermal changes. The other patch tests showed a ++ reaction to formaldehyde and a + reaction to melamine-formaldehyde resin at D2. There was a ?+ reaction to desoximethasone at D2, but no response to mometasone cream (as is) or fluocinolone 0.025% pet. The urticarial reaction to benzyl alcohol had faded by D6, though a mild urticaria appeared over the abdomen at D5, which cleared within a few days with oral diphenhydramine, avoidance of salicylates and FD&C Yellow 5 and 6.

Following the patch test results, the patient was advised to wear clothing free from fabric finishes and to avoid sources of benzyl alcohol. Her stasis dermatitis cleared promptly with 0.025% fluocinolone acetonide ointment, to which she was patch-test negative.

Discussion

Published cases of contact sensitivity to benzyl alcohol involve parenteral corticosteroids (1), antibacterial (2), creams (3), topical corticosteroids (3, 4), analgesic spray (5), epoxy adhesive (6), hearing aid (7), cutting oil (8), sclerosing agent (9), antifungal (10), sunscreen (11), and cross-reactions with Myroxylon Pereirae (12).

However, sensitivity to benzyl alcohol is said to be rare (7), with no positive tests in 501 persons in 1 series (13). Contact urticaria has been reported (11) and systemic reactions are known to occur with some parenteral medications (1). While we do not test to benzyl alcohol routinely, we do use bacteriostatic saline in intradermal testing for sensitivity to hydrocortisone, as bacteriostatic saline is used as a diluent unless the control is positive, in which case, the test is redone with saline lacking a preservative. The shelf life of the latter test material is nil unless a preservative is included, so the entire supply of hydrocortisone must be disposed of the day after the test is administered.

Review of our records showed that, since 1999, 440 persons had had intradermal tests to hydrocortisone, with 4 showing a positive (+) control: 3 immediate and 1 delayed. Reactions to the control (0.9% benzyl alcohol in saline) are assumed to be positive because of the benzyl alcohol. The present patient would ordinarily have been thus tested to hydrocortisone, had she not given a history of sensitivity to benzyl alcohol, so the frequency in this population might be stated as 4/441 (0.9%) for urticarial responses and 1/441 (0.2%) for delayed response.

Unlike the patient Shaw (7) reported, this patient had only a doubtful reaction to 1 of 3 corticosteroid patch tests, and her stasis dermatitis cleared after changing to fluocinolone acetonide, to which she was not allergic. The generalized urticaria appeared some 4–5 days after

patch tests were applied to her back, so, while it is possible that the urticaria was also related to the patch test, the onset is probably too late.

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