

Vesicular dermatitis of the hands secondary to perianal allergic contact dermatitis caused by preservatives in moistened toilet tissues

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Guimaraens et al. (1) recently reported a case of allergic contact dermatitis of the hands in a woman caused by chloromethylisothiazolinone in moistened toilet tissues used for her baby. They suggested this localization to be previously unreported; however, the hands as target for dermatitis caused by moistened toilet paper have been recognized previously, though in a different setting (2).

Case Reports

Case no. 1 (2)

A 45-year old man was seen in 1988 with long-standing perianal itching. Skin scrapings revealed a fungal infection. Topical treatment with bifonazole cured it within 3 weeks. 1 year later, the patient again had a perianal fungal infection, but also displayed a vesicular dermatitis of both palms. Oral and topical antimycotics improved the anal condition considerably, but had no effect on the hands. Patch tests revealed contact allergy to methyl(chloro)isothiazolinone (MCI/MI) and his moistened toilet paper, which later proved to contain the preservative. After discontinuation of the moistened toilet paper, the patient has remained symptom-free since 1989.

Case no. 2 (2)

A 51-year old man had suffered from seborrhoeic dermatitis of the scalp, ears, axillae and perianal area since 1982. In 1990, he had an acute exacerbation of perianal dermatitis, with erythema, oedema and papules, and also noticed a vesicular dermatitis of both palms. Patch testing revealed contact allergy to MCI/MI. The patient admitted to the use of 3 different brands of moistened toilet tissues, 2 of which contained the preservative. Since discontinuation of their use, the patient still suffers from periodic attacks of seborrhoeic dermatitis, but he has had no vesicular hand dermatitis since 1990.

Case no. 3

A 26-year old woman had complained of haemorrhoids and perianal irritation for several weeks. On examination, she had a florid dermatitis around the anus and on her buttocks and thighs, and vesicular dermatitis of both palms. Patch testing revealed contact allergy to methyldibromoglutaronitrile, perfume mix, musk ambrette and wool wax alcohols. She used a (fragranced) moistened toilet tissue known to contain methyldibromoglutaronitrile. After discontinuation, all symptoms disappeared and the patient has had no recurrences since November 1994.

Case no. 4

A 41-year old woman had had irritation around the anus for 6 months. On examination, she had an erythematous papular dermatitis; in addition, she had a symmetrical eruption of small vesicles on the palmar aspect of several fingers. Patch testing revealed contact allergy to methyldibromoglutaronitrile and her moistened toilet tissue, known to contain the preservative. After discontinuation, all symptoms disappeared and the patient has had no recurrences since June 1994.

Discussion

Perianal allergic contact dermatitis caused by preservatives such as MCI/MI (2–4) and methyldibromoglutaronitrile (3–6), and by fragrances (3), is well-known. The patients presented here had, in addition to their perianal dermatitis, symmetrical vesicular dermatitis of the palms or fingers, which disappeared after discontinuation of the use of moistened toilet tissues. This suggests that the tissues and/or the allergic contact dermatitis in the perianal area caused the hand eruption. It is highly unlikely that the vesicular hand dermatitis can be explained by direct contact with the tissues. The dermatitis was symmetrically located on the palms in 3 of the patients, whereas people using such tissues for personal hygiene use them with one hand only, and more with the fingers than with the palms. In addition, most people wash their hands after wiping the anus with tissues, thus removing most of the allergen from the hands.

The vesicular dermatitis is thus considered to be an id reaction (acrovesicular dermatitis, dyshidrotic eczema, pompholyx) to the allergic reaction around the anus, possibly by percutaneous absorption of the allergen in the richly vascularized perianal area. Clearly, hand dermatitis from direct contact with moistened toilet tissues may also occur, notably in persons using the tissues for the hygiene of people under their care, as Guimaraens et al. have shown (1).

References

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Contact sensitivity in women with anogenital dermatoses

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Patients and Methods

201 women with anogenital dermatoses were referred to our contact dermatitis clinic over 14 years: 111 had a diagnosis of eczema, in 44 the diagnosis was unknown and in 46 the diagnosis was one of the following; psoriasis, lichen planus, vestibulitis or lichen sclerosus. 103 had a dermatosis only involving the vulva, 42 had perianal involvement only, and 56 had dermatoses involving both sites.

They were tested against the European standard series, a medicament series, a corticosteroid series and their own topical medicaments. Other specific allergens were tested where relevant. Patches were removed and read at 2 days and again at 4 days.

Results

79 (39%) of the 201 patients had 1 or more allergic reactions. Only 56 (28%) patients were found to have clinically relevant positive allergic reactions. The commonest types of relevant allergens are shown in Table 1.

19% of the patients with dermatoses only involving the vulva had a clinically relevant positive patch test (Table 2). This was significantly lower (χ^2) than those with dermatoses involving both sites ($p < 0.002$), but compared to the 33% who only had perianal dermatoses, the difference did not reach significance ($p < 0.07$).

Table 2. The % of patients with clinically relevant allergic reactions

Site of dermatosis	% of patients with clinically relevant positive allergic reactions
vulva	19
perianal skin	33
vulva and perianal skin	43

Reactions to local anaesthetics, tixocortol pivalate and antibiotics were commonest in patients with perianal dermatoses (Table 1).

Discussion

One large study of patients with vulval dermatoses has reported similarly low numbers of clinically relevant positive patch test reactions (1), whilst others have reported higher numbers (2, 3), but none have commented on the presence of perianal disease in their patients. Contact sensitivity is a common finding in patients with perianal dermatoses and pruritus ani (4). Vulval and perianal skin, though structurally and developmentally very similar, are functionally different. The vulval skin is exposed to foreign proteins during sexual intercourse and may therefore be more "resistant" to sensitization. Conversely, vulval skin has been shown to be very sus-

Table 1. The total number and % of patients with clinically relevant positive allergic reactions according to the site of their problem

Type of allergen	No. patients with allergic reactions	% of patients with positive reactions according to the site of their dermatosis		
		Vulval only	Perianal and vulval	Perianal only (42)
antibiotics	17 (including 15 to neomycin)	3	13	17
antifungals	5	3	4	0
antiseptics	4	1	5	2
perfume	15	7	5	12
local anaesthetics	17	3	9	21
preservatives	4	3	0	2
corticosteroids	13	2	9	14
miscellaneous (lanolin, Santolite resin)	2	1	5	0

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