



# Textile-induced vulvar and perianal dermatitis

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We present a case of chronic vulvar and perianal pruritus that highlights the importance of patch testing for textile allergens in the work-up of cases of chronic anogenital pruritus.

## CASE REPORT

A 41-year-old woman had a 1.5-year history of severe vulvar and perianal pruritus exacerbated by exercise and unresponsive to topical corticosteroids, oral antihistamines, avoidance of personal hygiene products, and topical and oral fluconazole. She was referred to our contact dermatitis clinic, where examination showed perineal lichenification without erythema or vesiculation; vaginal examination gave unremarkable findings. We performed patch testing with the North American Contact Dermatitis Group 80 series and a textile series (Chemotechnique Diagnostics, Vellinge, Sweden), which showed ++ reactions to Disperse Blue 106/Disperse Blue 124 1% pet.

(individually and in combination), textile dye mix 6.6% pet., dimethylol ethylene urea 4.5% pet. and melamine formaldehyde mix 7% pet. on the day 4 reading. According to our advice, she completed a 2-week course of topical clobetasol on the affected skin sites, and meticulously avoided dyed, synthetic and tight-fitting fabrics, particularly in her underwear and athletic garments. After 3 weeks, her vulvovaginal pruritus cleared, obviating the need for a previously scheduled visit with a dermatologist subspecializing in gynaecological cases.

## DISCUSSION

Recurrent or chronic vulvar pruritus is an important cause of morbidity that affects quality of life because of impaired social and sexual function. Although the differential diagnosis spans inflammatory, infectious and neoplastic conditions, we note from the literature that up to 50% of cases of vulvovaginal pruritus in adults are attributable

to contact dermatitis (allergic or irritant).<sup>1,2</sup> Two studies of 282 and 135 women with vulvar dermatitis and pruritus, respectively, showed positive patch test allergens in the majority of cases, with 49% and 29% of these allergens in the respective studies being considered to be relevant.<sup>3,4</sup> This high prevalence of contact dermatitis is thought to be fostered by the fact that vulvar skin is compromised readily by moisture, enzymes (from urine and stools), friction, and heat.<sup>2</sup>

Our case exemplifies the importance of considering textiles in clothing as a cause of persistent vulvar and perianal dermatitis, for which the most common allergic culprits are disperse dyes and formaldehyde resins. We note that the rate of true formaldehyde-associated textile dermatitis is declining in the United States as textiles with lower rates of formaldehyde release are now used, but the presence of cellulosic fibres treated with these resins (especially rayon) within some athletic garments and underwear is possible.<sup>5</sup> Interestingly, our patient showed positive patch test reactions solely to these textile allergens, and not to the other more commonly reported allergens associated with vulvar contact dermatitis, namely, *Myroxylon pereirae* (balsam of Peru), fragrance mix, ethylenediamine, neomycin, topical corticosteroids, and caine mix.<sup>3,4</sup> Moreover, our review of the literature showed that the genitalia and the perianal area are not listed as common sites of textile-induced dermatitis.<sup>5</sup> In fact, in the the aforementioned studies of vulvovaginal ACD, textile allergen series were not included in patch testing.<sup>2,3</sup> A limitation of our report is that we did not test our patient with specific suspect garments or individual chemical compositions identified within the fabrics. However, we consider her dramatic relief from itching following avoidance of synthetic or dyed underwear

and athletic clothing to be strong circumstantial evidence for disperse dyes and formaldehyde resins being relevant allergens.

## CONFLICTS OF INTEREST

The authors have no conflicts of interest to report.

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