

Allergic contact dermatitis to colophonium in a sanitary pad—an overlooked allergen?

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Vulval dermatitis is occasionally caused by contact allergy, with rare cases being caused by constituents of sanitary pads. We report a woman with chronic vulval irritation who had a positive patch test reaction to her own colophonium-containing sanitary pad.

Case Report

A 36-year-old woman developed acute facial dermatitis after using a fragranced moisturizer. She had a history of rashes caused by adhesive dressings and chronic intermittent vulval soreness during her menses.

Patch tests on 8-mm Finn Chambers® on Scanpor® tape with Chemotechnique® allergens were performed with the extended British baseline series of allergens, a cosmetic series, and her own skin care products and sanitary pad (cloth sides and adhesive sides separately). Readings at D3 and D4 showed the following: 2+ reaction to colophonium (20% pet.); and 1+ reaction to the cloth side of her Always Ultra™ sanitary pad, *Myroxylon pereirae* (25% pet.), fragrance mix I (8% pet.), her fragrance-containing moisturizer (Aveda™), lanolin (lanolin alcohol 30% pet.), and neomycin (neomycin sulfate 20% pet.).

Procter & Gamble informed us that the absorbent core of Always Ultra™ consists of cellulose derived from pine and spruce pulp. The patient avoided fragranced products and changed to alternative sanitary protection, and her symptoms resolved completely.

Discussion

Allergic contact dermatitis caused by sanitary pads appears to be rare, with few reports in the literature. Documented allergens include preservatives, fragrances, and methacrylate adhesives (1). The pine derivative colophonium is a common environmental allergen, and contact

allergy is usually related to its use in adhesives or fragrances. Paper pulp contains varying residual levels of colophonium, and has rarely been identified as a relevant source of exposure (2).

Colophonium has been identified in sanitary pads and diapers by gas chromatography (3). Interestingly, this study showed a lower concentration in Always Ultra™ than in several other brands. A case series described 28 women with vulval contact dermatitis in association with Always Ultra™, but patch testing was not undertaken (4), and we have been able to identify only one report in the literature that specifically describes contact allergy to colophonium in a sanitary pad (2).

Sanitary pad dermatitis tends to be cyclical, with deterioration during each menses (5). Vulval skin is more easily penetrated than skin on the forearm, owing to its relatively thin stratum corneum (5–8). It has been suggested that the elicitation threshold may be higher on the upper back than on vulval skin, leading to false-negative results with conventional allergen concentrations (7). The positive patch test reaction with a sanitary pad in our patient is extremely unusual, and indicates that she is highly sensitized to colophonium, in keeping with her strongly positive patch test reaction. We propose that prolonged occlusion with moist skin permitted the low level of colophonium in her sanitary pad to elicit symptoms. Tampons are made from cotton, and constitute suitable alternative sanitary protection for colophonium-allergic women.

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