

Vulvar Allergic Contact Dermatitis from Clotrimazole

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Précis

A woman with vulvar allergic contact dermatitis from clotrimazole showed no cross-reactivity to eight other imidazole antifungals.

Discussion

A 47-year-old female presented for evaluation of a pruritic and painful vulvar dermatitis. The dermatitis began approximately 3 years prior to presentation, shortly after the use of over-the-counter vaginal suppositories for treatment of a presumed yeast infection. Prior treatments included topical and oral steroids, systemic antibiotics and antifungals, nystatin powder, A+D Ointment (Schering-Plough Kenilworth, NJ), and three different topical clotrimazole creams, with no improvement. Several vaginal potassium hydroxide and wet preparations had negative results. Biopsy specimens from the labia majora and the vulva showed chronic dermatitis and lichen simplex chronicus. The patient denied having used tampons, pads, douches, condoms, or other genital contactants. Physical examination revealed a large, confluent, and bright red lichenified plaque with linear excoriations, small erosions, and scale covering the entire mons pubis, labia majora, medial thighs, inguinal folds, and medial buttocks (Fig 1). The labia minora, vaginal mucosa, and anal area were spared.

The patient was initially patch-tested with the North American Contact Dermatitis Group standard allergens, corticosteroids, antifungals, vehicles, preservatives, acrylates, plastics and glues, and personal products. Clinically relevant positive reactions to clotrimazole cream and purified clotrimazole were noted at 48 hours (Fig 2) and 96 hours. Pertinent negative reactions were to sorbitan monostearate, cetostearyl alcohol, benzyl alcohol, and propylene glycol (inactive ingredients in the clotrimazole

PEARLS provide insight into understanding disease pathogenesis or improving treatment. ZEBRAS inform about previously unrecognized conditions or atypical variants of known disorders.

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creams). Repeat patch testing with personal products and additional antifungal agents showed positive reactions at 96 hours to clotrimazole cream and purified clotrimazole, macular erythema from one clotrimazole-betamethasone cream, and no reactions to the following additional antifungal agents: nystatin 2% in petrolatum (pet), ketoconazole 5% pet, econazole 1% in alcohol (alc), miconazole 1% alc, tioconazole 1% pet, sertaconazole 2% cream, oxiconazole 1% cream, three fluconazole 2 mg/mL aqueous dilutions (1:10–1,000), and three voriconazole 10 mg/mL aqueous dilutions (1:10–1,000). Borderline reactions to the clotrimazole-betamethasone creams were hypothesized to be due to the suppressive effect of the corticosteroid. Three months after discontinuation of clotrimazole, the dermatitis dramatically improved.

Clotrimazole is a phenmethyl imidazole commonly used as a topical treatment of vaginal candidiasis, seborrheic dermatitis, and tinea pedis. A literature search found reference to 16 patients who had positive patch-test reactions to clotrimazole; most positive reactions were to 1% clotrimazole in an ethanol or methyl ethyl ketone

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Figure 1. Vulvar dermatitis at presentation.

vehicle. Of the 11 clinically relevant cases, six involved the genital area¹⁻⁶ and one involved the perianal area. Of the 14 patients tested with at least one other imidazole (phenethyl imidazoles [miconazole-6, econazole-4, tioconazole-4, itraconazole-2, oxiconazole-1] or a phenmethyl imidazole [croconazole-1]), eight showed cross-reactivity.

Pearl

This “monoallergic” case of contact dermatitis from clotrimazole shows that other imidazoles may serve as safe alternate therapies.



Figure 2. Reading at 48 hours.

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