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Acute generalized exanthematous pustulosis due to nystatin confirmed by scratch patch test

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Consent was obtained from the patient for the images to be included in the article.

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Nystatin is an antifungal medication widely used for treatment of oral candidiasis. It has rarely been described as causative agent in acute generalized exanthematous pustulosis (AGEP).^{1,2,3} Patch testing in the investigation of delayed drug reactions often yield false-negative results. Here, we described a case of nystatin-induced AGEP, confirmed by scratch patch testing.

Case Report

A 70 year-old female consulted for a rapidly progressive exanthema covering ~ 90% of her body with hundreds of micropustules on the trunk accompanied by fever (Fig. 1). Twelve hours prior to the start of the rash, she was prescribed nystatin suspension (100 000 units/ml) QID for oral candidiasis. She was instructed to use it as a mouthwash and to swallow it after each use. Blood work showed elevated inflammatory markers (CRP 152 mg/L, sedimentation rate 31 mm/h) and neutrophils ($21 \times 10^9/L$). Eosinophils were normal. A biopsy was taken and revealed pustular dermatosis, spongiosis and perivascular inflammation with eosinophils, consistent with a diagnosis of AGEP. Nystatin was discontinued and the patient was treated with oral prednisone (1mg/kg) and betamethasone 0.1% cream which ensured the resolution of the eruption.

Patch testing was performed 5 months after the eruption using nystatin dilutions (10% aqua, 30% aqua, 10% petrolatum and 30% petrolatum). The dilutions were applied in IQ chambers® (Chemotechnique, Vellinge, Sweden) for 48 hours on the back of the patient in duplicate, using patch and scratch patch technique. Scratch patch test consisted of scarification of the epidermis before patch placement. Readings were performed at 48 and 120 hours and demonstrated clear positive reactions only with the scratch patch technique (2+ for all dilutions). (Fig. 2)

Discussion

This is, to our knowledge, the first description of a delayed allergy to nystatin confirmed by scratch patch testing. In the few reported cases of nystatin-induced AGEP, patch tests were useful to confirm the diagnosis, but were sometimes negative.⁴ Prick tests were used in one report but were only positive a few days later, consistent with a delayed hypersensitivity.² Disruption of the epidermal barrier with scratch patch testing allows deeper penetration of the drug into the skin, making the reaction easier to observe⁵. This case suggests that adding the scratch patch technique to patch testing could help uncover nystatin allergies that would have gone otherwise undiagnosed.

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Figure 1 – Erythroderma secondary to nystatin induced acute generalized exanthematous pustulosis.

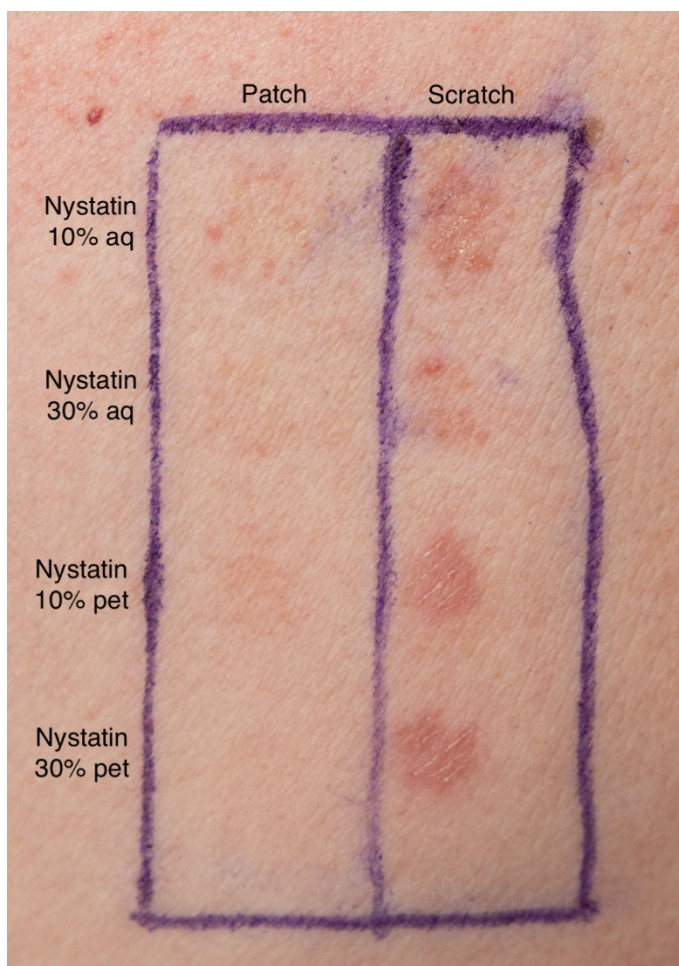


Figure 2 – Comparison of patch and scratch patch results at 120 hours.