

# Bullous Eruption in 2 Brothers

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Brothers aged 7 and 8 years with a history of atopic dermatitis presented to the emergency department with similar diffuse pruritic eruptions of 1 week's duration. They previously were treated with permethrin cream 5% without improvement. Two days prior to presentation they developed painful pustules on the hands and feet. No other family members were affected. Physical examination revealed numerous yellow pustules and vesicles in the interdigital web spaces, elbows, and knees. Notably, the penis and scrotum also were involved in both brothers. A potassium hydroxide preparation of small pustules was obtained.

## WHAT'S THE DIAGNOSIS?

- bullous impetigo
- bullous scabies
- bullous tinea
- childhood bullous pemphigoid
- dyshidrotic eczema

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The authors report no conflict of interest.

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## THE DIAGNOSIS: Bullous Scabies

Scabies infection is caused by the mite *Sarcoptes scabiei* var *hominis*. It is commonly transmitted via direct skin-to-skin contact.<sup>1</sup> Classic manifestations include pruritus that worsens at night. It commonly presents with burrows and papules in the interdigital web spaces, as well as flexor surfaces of the wrists, elbows, axillae, buttocks, and genitalia. Pruritus occurs from infestation and delayed hypersensitivity reaction to mites. The recommended treatment of classic scabies is permethrin cream 5% for all occupants of the household and a repeat application for just the patients in 1 week. Posttreatment pruritus can last up to 3 weeks.<sup>2</sup> At-risk populations include school-aged children and patients in long-term care facilities.

In our case, bullous lesions in a classic distribution with potassium hydroxide preparation of a scabietic mite (Figure) confirmed the diagnosis of bullous scabies. Treatment of bullous scabies is the same as classic scabies. Both patients were treated with 1 application of permethrin cream 5% before we evaluated them. We instructed to repeat application in 7 days for both boys and all family members.

Bullae may be secondary to hypersensitivity response<sup>3</sup> or superinfection with *Staphylococcus aureus* causing bullous impetigo.<sup>4</sup> Bullous scabies may present a diagnostic challenge and requires a high index of suspicion. Although childhood bullous pemphigoid can involve the palms and soles, patients usually present in infancy. Diagnoses such as dyshidrotic eczema and bullous tinea can present with pustules on the hands and feet; however, involvement of the genitalia would be uncommon.



Potassium hydroxide preparation showing a female scabies mite.

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