



## Rapid-onset rash in child

Our patient's pruritic rash was spreading throughout his trunk and arms. An acute infection 10 days earlier shed light on the diagnosis.

A 7-YEAR-OLD BOY was brought to his family physician for evaluation of a mildly pruritic spreading rash. Ten days earlier, the skin eruption had appeared, and he was given a diagnosis of streptococcal pharyngitis, which was confirmed by a throat swab and a positive antistreptolysin O titer. The child had no personal or family history of skin disorders, including eczema or psoriasis. He hadn't used any topical agents or new medications recently, nor had he been exposed to triggering plants,

animals, or chemicals. There was no history of trauma, friction, or rubbing in the area.

Physical examination revealed multiple erythematous, scaly papules and plaques of varying size on the patient's trunk, arms, and legs (FIGURE). His palms and soles were spared.

- WHAT IS YOUR DIAGNOSIS?
- HOW WOULD YOU TREAT THIS PATIENT?

### FIGURE

Scaly papules and plaques on 7-year-old's trunk and arms



IMAGE COURTESY OF: SUSANA MACHADO, MD

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➤ One-third of children with guttate psoriasis go on to develop plaque psoriasis later in life.

## Diagnosis: Guttate psoriasis

A diagnosis of guttate psoriasis was made based on the physical exam findings and the preceding group A beta-hemolytic streptococcal infection.

This condition affects approximately 2% of all patients with psoriasis; it is characterized by the acute onset of multiple erythematous papules and small plaques that look like droplets (“gutta”).<sup>1</sup> It tends to affect children and young adults and typically occurs following an acute infection (eg, streptococcal pharyngitis).<sup>2,3</sup> In this case, a rapid strep test and throat culture positive for group A *Streptococcus* supported the diagnosis.

Although this particular phenotype of psoriasis is usually associated with streptococcal infection and mainly occurs in patients with the HLA-Cw6+ allele, the specific immunologic response that causes these skin lesions is poorly understood.<sup>4</sup> Antigenic similarities between streptococcal proteins and keratinocyte antigens might explain why the condition is triggered by streptococcal infections.<sup>5</sup>

## Pityriasis rosea and tinea corporis are part of the differential

The differential includes skin conditions such as pityriasis rosea, tinea corporis, varicella, and insect bites.

■ **Pityriasis rosea** can manifest as a papulosquamous eruption, but it has an inward-facing scale, called a collarette. The “Christmas tree” pattern on the back that is preceded by a solitary 2- to 10-cm oval, pink, scaly herald patch (in 17%-50% of cases) is key to the diagnosis.<sup>6</sup> (For more information, see “Rash on trunk and upper arms” at <https://bit.ly/2w4t7bm>.)

■ **Tinea corporis** is a dermatophyte infection that causes flat, red, scaly lesions that progress into annular lesions with central clearing or brown discoloration. The plaques can range from a few centimeters to several inches in size, but are always characterized by the slowly advancing border.<sup>6</sup>

■ **Varicella** also affects the trunk and extremities, but a key clinical finding is crops of characteristic lesions, including papules, vesi-

cles, pustules, and crusted lesions in different stages that manifest simultaneously.<sup>6</sup>

■ **Insect bites** usually appear as urticarial papules and plaques associated with outdoor exposure. The lesions are distributed where insects are likely to bite.<sup>6</sup>

## Treat the infection, control the psoriasis

The first-line treatment for streptococcal infection is amoxicillin (50 mg/kg/d [maximum: 1000 mg/d] orally for 10 d) or penicillin G benzathine (for children < 60 lb,  $6 \times 10^5$  units intramuscularly; children  $\geq 60$  lb,  $1.2 \times 10^6$  units intramuscularly).<sup>7</sup> For the psoriasis lesions, treatment options include topical glucocorticosteroids, vitamin D derivatives, or combinations of both.<sup>5</sup> In most cases, guttate psoriasis completely resolves. However, one-third of children with guttate psoriasis go on to develop plaque psoriasis later in life.<sup>8</sup>

Our patient was treated with penicillin G benzathine ( $1.2 \times 10^6$  units intramuscularly) and a calcipotriol/betamethasone combination gel. The streptococcal infection and skin lesions completely resolved. No adverse events were reported, and no relapse was observed after 3 months.

JFP

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