

Erythematous Papules and Plaques on the Flank of a Child

What's the diagnosis?



A 2-year-old girl presented with a mildly pruritic rash on the right flank and axilla of 3 weeks' duration. Her pediatrician prescribed triamcinolone cream 0.1% daily, which was applied for the last week without much improvement. Her mother reported a history of upper respiratory tract infection approximately 1 to 2 weeks prior to onset of the rash.

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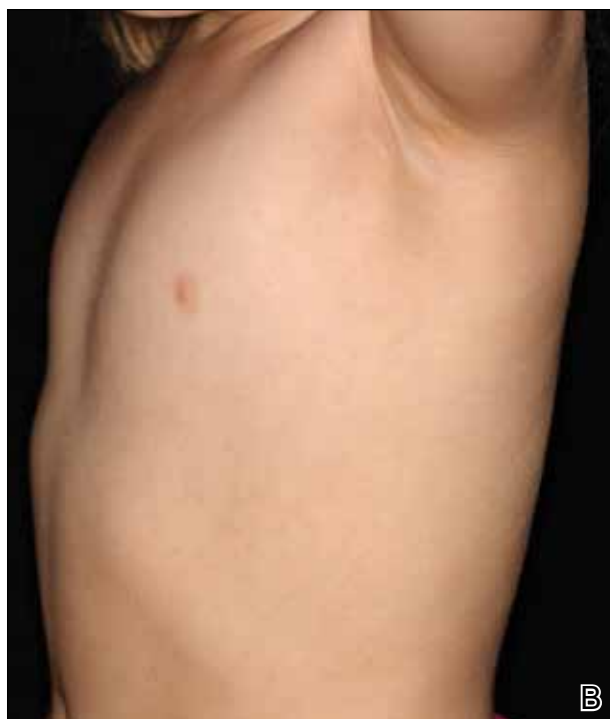
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The Diagnosis: Asymmetric Periflexural Exanthem of Childhood (Unilateral Laterothoracic Exanthem)

Asymmetric periflexural exanthem of childhood (APEC), also known as unilateral laterothoracic exanthem, is a self-limited eruptive dermatosis that occurs most frequently in infants and young children. The term *unilateral laterothoracic exanthem* was first coined by Bodemer and de Prost¹ in 1992 due to its characteristic distribution. The eruption occurs in children aged 4 months to 10 years, with most cases presenting between 2 and 3 years of age.² Isolated cases also have been reported in adults.³ It affects girls more often than boys (2:1), and the majority of reported cases have occurred in white individuals. The disease is seen throughout Europe and North America, and seasonal variation has been noted with most cases occurring in late winter and early spring.^{4,5}

Clinically, APEC is characterized by its asymmetric localization and unilateral onset. In the majority of patients, the eruption presents as discrete erythematous papules that coalesce to form morbilliform plaques that may have reticular or annular configuration (Figure).⁴ The exanthem begins unilaterally near a flexural area, most commonly the axilla (75% of cases), and spreads centrifugally to the adjacent trunk and proximal extremity. There is no right or left dominance.^{4,6} There is eventual involvement of the contralateral side in 70% of cases, but a unilateral predominance is maintained throughout the disease course.⁴ Rarely, the eruption may involve the face, genitals, and palmoplantar surfaces. As in our case, up to three-quarters of affected children report symptoms of an upper respiratory tract or gastrointestinal prodrome, including mild fever, diarrhea, and rhinitis.⁴ Accompanying regional lymphadenopathy has been reported in the majority of cases, and mild to moderate pruritus is not uncommon. The syndrome is self-limited, with spontaneous resolution commonly occurring 3 to 6 weeks after onset. Although no treatment is required, systemic antihistamines and topical steroids have been used to alleviate pruritus in symptomatic patients. Our patient was treated with triamcinolone cream 0.1% twice daily as well as oral diphenhydramine 25 mg every 6 hours as needed for associated pruritus. The eruption spontaneously resolved over the following 4 weeks.

Although the cause of APEC remains unknown, an infectious etiology has been presumed. The seasonal pattern, lack of efficacy of broad-spectrum antibiotics, frequently reported prodromal symptoms, and reports of familial cases suggest a viral etiology.¹ Additionally, the predilection to affect infants and



Fine erythematous macules coalescing to form morbilliform plaques with a reticulated pattern on the right axilla, flank, and chest (A). Unaffected contralateral left axilla and flank (B).

young children as well as lack of recurrence in the same patient suggests that immunity may develop. Although no etiologic agent has been consistently detected, several reports have suggested a possible relationship to parvovirus B19.^{7,8} Parainfluenzavirus 2, parainfluenzavirus 3, and adenovirus also have been isolated but may represent incidental viral infection.² An inoculation dermatosis from an arthropod bite also has been suggested, but this claim has not been substantiated.¹

The diagnosis often can be made on clinical features alone, and histopathologic evaluation is not required. Histologic features are nonspecific and include a superficial perivascular infiltrate of lymphocytes, often involving the dermal eccrine ducts without involvement of the secretory coils.^{4,6} Mild lichenoid changes as well as spongiosis with exocytosis of lymphocytes into the acrosyringium also may be present.⁴ The clinical differential diagnosis of APEC includes allergic contact dermatitis, a nonspecific drug or viral eruption, atypical pityriasis rosea, miliaria, scabies, tinea corporis, and Gianotti-Crosti syndrome. Asymmetric periflexural exanthem of childhood lacks the peripheral scale present in tinea corporis or pityriasis rosea, but when an annular or reticular configuration predominates, a potassium hydroxide preparation of skin scrapings can exclude the presence of a dermatophyte. Similar to APEC, Gianotti-Crosti syndrome affects young children, is preceded by symptoms of a viral prodrome, and spontaneously resolves over several weeks. This condition is distinguished from APEC by the presence of papulovesicles located symmetrically on the face, buttocks, and extensor surface of the extremities, which largely spare the trunk.

Asymmetric periflexural exanthem of childhood is a unique morbilliform eruption of infants and

young children characterized by a stereotypical distribution and self-limited course. The cause of this syndrome remains unclear, but most authors suggest a viral etiology. Recognition of this entity and an ability to distinguish it from other common pediatric dermatoses is required to provide reassurance to parents and avoid unnecessary diagnostic procedures and treatments.

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