A 22-Month-Old Girl with Lesions on the Face and Extremities

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A 22-month-old black girl presented to the emergency department with a 5-day history of an itchy rash. Her family reported that the rash started as itchy bumps on the extremities and spread to the face and buttocks and was associated with a runny nose and cough. There was no history of fevers, abdominal pain, vomiting or diarrhea. The patient had a medical history significant for pyleonephritis, pneumonia, and meningitis. She did not have any allergies to medications and was not taking any medications.

The vital signs on presentation were temperature of 36.3°C; pulse of 130 beats per minute; respiratory rate of 24 breaths per minute; and blood pressure of 124/57 mm Hg. Physical exam demonstrated monomorphous, flesh-colored papules, some with overlying excoriations, primarily located on the cheeks (see Figure 1), arms (see Figure 2), and legs and buttocks (see Figure 3). The patient’s complete blood count (CBC) and complete metabolic panel (CMP) were within normal limits except for a slightly elevated white blood cell count with 48% lymphocytes.

CME EDUCATIONAL OBJECTIVES

1. Diagnose Gianotti-Crosti syndrome (GCS) based on the clinical presentation.
2. Understand the various etiologies (viral, immunizations, bacterial) associated with GCS.
3. Know the natural course of GCS.

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Figure 1. Monomorphous flesh-colored papules some with overlying excoriations on the cheeks.
Diagnosis:
Gianotti-Crosti Syndrome

DISCUSSION
Gianotti-Crosti syndrome, also known as papular acrodermatitis of childhood, is an exanthem characterized by the acute onset of pink to red-brown or flesh-colored monomorphic edematous papules sometimes coalescing into plaques symmetrically distributed on the face, buttocks and extremities, sparing the flexures. The color of the lesions may be variable depending on the background skin color of the affected child. Lesions are rarely present on the trunk, palms, or soles. The lesions are usually asymptomatic but can be pruritic.

Systemic manifestations include low-grade fevers and lymphadenopathy in about 25% to 35% of patients, as well as upper respiratory tract infection symptoms, as our patient had. Hepatosplenomegaly rarely may be present. Gianotti-Crosti syndrome is more common in the summer and early spring. The average age of onset is between 6 months to 14 years old with a mean age of 2 years. Cases have been described infrequently in adults.

The diagnosis is made based on the characteristic distribution and morphology of the rash. Histopathology findings are nonspecific and therefore not typically relied upon for diagnosis. The remarkable consistency of truncal sparing, with papules involving the buttocks, cheeks and extremities set this eruption apart from other viral exanthems and hypersensitivity reactions.

The pathogenesis of Gianotti-Crosti syndrome is not completely understood but is considered to be a cutaneous response to various immunologic triggers. Historically, hepatitis B virus was the presumed trigger for Gianotti-Crosti syndrome. It is now recognized that this eruption may be associated with a variety of viruses, including: hepatitis A and C viruses; Epstein-Barr virus; cytomegalovirus; coxsackie virus; respiratory syncytial virus; adenovirus; parainfluenza virus; rotavirus; parvovirus B19; mumps virus; echovirus; human herpesvirus 6; and human immunodeficiency virus. Currently, the most commonly associated virus in the United States is Epstein-Barr virus.

Gianotti-Crosti syndrome has also been associated with bacterial infections, including Mycoplasma pneumoniae, group A beta-hemolytic streptococci, and Bartonella henselae, as well as vaccines including MMR, hepatitis B, influenza, DPT, and polio. Inflammatory skin disorders may also be involved in the pathogenesis since Gianotti-Crosti syndrome is more of-
ten seen in patients with a history of atopic dermatitis.6

The differential diagnosis of this exanthem includes papular urticaria, scabies, and drug reaction. There are a few features that can help differentiate these entities from Gianotti-Crosti syndrome. Scabies and papular urticaria are usually very itchy and not associated with fever and lymphadenopathy. Scabies usually involves the hands and interdigital spaces, as well as the genitals. Drug reactions often involve the trunk initially and spread centripetally. The absence of a precipitating medication is typical in the setting of Gianotti-Crosti syndrome; however recent immunizations are an important potential trigger.

Treatment for Gianotti-Crosti syndrome is usually supportive. Anecdotally, lesions may resolve more rapidly with a mid-potency topical corticosteroid applied once daily for 7 to 14 days, but this effect has never been established in a controlled setting. Lesions will usually resolve spontaneously within 4 to 6 weeks but may persist for 8 weeks. ■

REFERENCES