

Answer to Dermacase continued from page 712

4. Gianotti-Crosti syndrome

Gianotti-Crosti syndrome, also known as infantile papular acrodermatitis or papular acrodermatitis of childhood, is a common, self-limiting dermatosis that occurs worldwide. It affects infants and children between the ages of 6 months and 12 years of age, with peak incidences occurring from ages 1 to 6 years.¹ In 1955, Gianotti and Crosti initially described the syndrome as a distinct infectious exanthem associated with the hepatitis B virus.² Today, however, Gianotti-Crosti syndrome is considered a cutaneous reaction pattern associated with viruses, bacteria, and vaccines.

The pathogenesis of Gianotti-Crosti syndrome is still unclear. Colombo et al suggested that either circulating viruses or immune complexes are responsible for the skin findings³; however, neither viral particles nor viral antigens have been observed in the lesions associated with Gianotti-Crosti syndrome. As such, it is accepted that pathogenesis could be due to the immature immune systems of infants and children resulting in different responses to viral infections.⁴

Diagnosis

Gianotti-Crosti syndrome is characterized by the acute onset of multiple monomorphous, flat-topped or dome-shaped, nonhyperkeratotic, red-brown papules and papulovesicles. The papules are distributed symmetrically on the cheeks, extensor surfaces of the extremities, and the buttocks. The trunk, palms, and soles are usually, but not always, spared. The rash can be slightly pruritic. The cutaneous manifestations might be preceded by an upper respiratory tract infection. Constitutional symptoms, including malaise, low-grade fevers, and diarrhea, are sometimes observed at presentation, but are usually mild.

Diagnosis of Gianotti-Crosti syndrome is usually made clinically. If there are elevations in liver enzymes, evaluation for hepatitis or Epstein-Barr virus should be performed. In the vast majority of cases, Gianotti-Crosti syndrome is a self-limiting, benign process, which usually resolves without scarring within 10 to 60 days. Rarely does postinflammatory hypopigmentation or hyperpigmentation occur.^{5,6}

Differential diagnosis

Hand, foot, and mouth disease is a systemic infection caused by an enterovirus, and is characterized by ulcerative oral lesions and a vesicular exanthem on the distal extremities. It is associated with fever, malaise, a sore mouth, diarrhea, and joint pain. Cutaneous lesions appear as tiny macules or papules that quickly evolve to vesicles. These vesicles contain a clear fluid with a watery appearance or yellowish hue; some lesions rupture with the formation of erosions and crusts.

Characteristically, lesions arise on the palms and soles, especially on sides of fingers and toes, and on the buttocks.⁷

Pityriasis rosea is an acute exanthematous eruption. At first, a primary or "herald" plaque (oval, slightly raised plaque, 2 to 5 cm in length, salmon-red in colour, with a fine collarette scale at periphery) develops, usually on the trunk. One or 2 weeks later a generalized secondary eruption (fine-scaling papules and plaques with a marginal collarette) develops in a typical distribution pattern (along the long axes of the oval lesions, following the lines of cleavage in a "Christmas tree" pattern). The entire process remits spontaneously within 6 weeks.⁷

Molluscum contagiosum is an epidermal poxvirus infection characterized by discrete pearly white or skin-coloured round or oval papules, 2 to 5 mm in diameter, which are slightly umbilicated. It spreads by touching, leading to autoinoculation. Individual lesions last 6 to 8 weeks and usually resolve spontaneously without scarring.⁷

Scabies is caused by an infestation of the mite *Sarcoptes scabiei*. It is characterized by severe generalized pruritus, which usually worsens at night; symptoms include excoriated papules, burrows, and nodules over the webs of fingers, wrists, elbows, axillae, buttocks, and genitalia. Face, and head are usually spared.⁸

Management

As Gianotti-Crosti syndrome is self-limiting, no treatment is necessary except for symptom relief. Oral antihistamines or topical anti-itch creams can alleviate severe pruritus, while topical steroids applied once daily for 1 to 2 weeks might decrease the duration of lesions. Systemic corticosteroids have been reported as effective in severe cases.⁹

Dr Wu is a senior resident and Dr Huang is a dermatologist in the Department of Dermatology at the Tri-Service General Hospital in Taipei, Taiwan.

Acknowledgment

We thank Dr Wei-Ming Wang, Assistant Professor in the National Defense Medical Center and Acting Director of the Department of Dermatology at the Tri-Service General Hospital in Taipei, Taiwan, for his generous guidance and support.

Competing interests

None declared

References

- Brandt O, Abeck D, Gianotti R, Burgdorf W. Gianotti-Crosti syndrome. *J Am Acad Dermatol* 2006;54(1):136-45. Epub 2005 Dec 2.
- Gianotti F. Rilievi di una particolare casistica tossinfettiva caratterizzata da eruzione eritemato-infiltrativa desquamativa a focolai lenticolari, a sede elettiva acroeposta. *G Ital Dermatol* 1955;96:678-9.
- Colombo M, Gerber MA, Vernace SJ, Gianotti F, Paronetto F. Immune response to hepatitis B virus in children with papular acrodermatitis. *Gastroenterology* 1977;73(5):1103-6.
- Mempel M, Abeck D, Bye-Hansen T, Ring J. Gianotti-Crosti syndrome in an adult patient following a recently acquired Epstein-Barr virus infection. *Acta Derm Venereol* 1996;76(6):502-3.
- Mempel M. Diagnostic criteria for Gianotti-Crosti syndrome: a prospective case-control study for validity assessment. *Cutis* 2001;68(3):207-13.
- Chuh A, Lee A, Zawar V. The diagnostic criteria of Gianotti-Crosti syndrome: are they applicable to children in India? *Pediatr Dermatol* 2004;21(5):542-7.
- Johnson RA, Wolff K, Suurmond D. *Fitzpatrick's color atlas and synopsis of clinical dermatology*. 5th ed. New York, NY: McGraw-Hill; 2005.
- Chosidow O. Clinical practices. Scabies. *N Engl J Med* 2006;354(16):1718-27.
- Boeck K, Mempel M, Schmidt T, Abeck D. Gianotti-Crosti syndrome: clinical, serologic, and therapeutic data from nine children. *Cutis* 1998;62(6):271-4; quiz 286.