Gianotti-Crosti Syndrome as Manifestation of *Mycoplasma pneumoniae* Infection

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A previously healthy 6-year-old boy was admitted to the pediatric emergency department with a three-day history of fever, axillary temperature of 38ºC every 6 hours, and slight dry cough associated with a pruritic and symmetric erythematous maculopapular eruption, predominantly affecting the face, buttocks, legs, extensor aspects of forearms, hands and feet (Figs. 1 and 2). Some of the papules coalesced into plaques. There was no lymphadenopathy, organomegaly or any other significant physical findings. The complete blood count revealed 8700 leukocytes/µL with 78.5% neutrophils and 15.1% lymphocytes, hemoglobin level at 12.5 g/dL and a platelet count of 235 000 cells/µL. C reactive protein serum concentration was increased (156 mg/L). The other laboratory values were within normal range. Based on history and physical findings, a diagnosis of Gianotti-Crosti syndrome was made and we recommended symptomatic treatment with topical emollients. Screening for immunoglobulins (Ig) M and G antibodies to *Mycoplasma pneumoniae* was performed by enzyme-linked immunosorbent assay and immunoglobulin concentration higher than 10 U/mL was considered positive. The evidence of an IgM titer of 13.0 U/mL and an IgG antibody titer of 0.4 U/mL was considered an indicator of recent infection and therefore a macrolide (azithromycin) was added to symptomatic care. Other serological tests, namely for hepatitis B virus (HBV), human immunodeficiency virus (HIV), cytomegalovirus (CMV) and Epstein–Barr virus (EBV) infection were also performed and negative. On the second day the fever subsided and by the third day the patient's rash was beginning to fade. The child was reevaluated in pediatric consultation 10 days after, presenting with cutaneous lesions resolution (Fig. 3). The patient exhibited seroconversion of *Mycoplasma pneumoniae* IgM three weeks after the inaugural episode, confirming the infection.

Gianotti-Crosti syndrome is a self-limited exanthema of acute onset with a characteristic acral distribution, usually occurring in children younger than 5 years, but older children also may be affected.[1,2] It is characterized by symmetric papules or papulovesicles, affecting mainly the face, buttocks and extremities.[1-3] It is often preceded by an upper respiratory tract infection or gastrointestinal

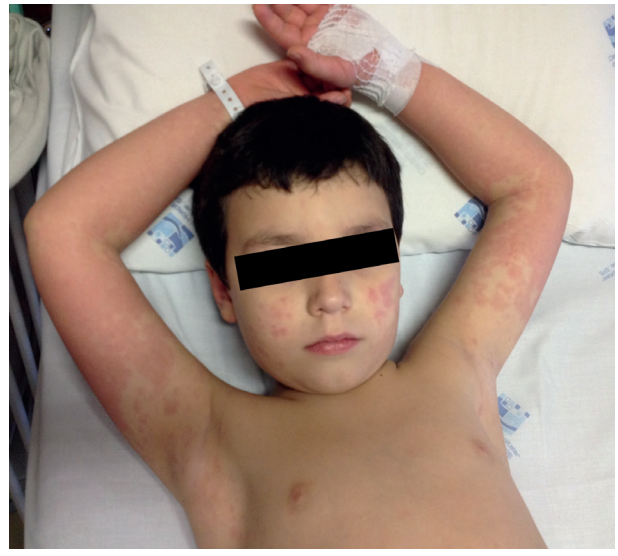

Figure 1. Symmetrical maculopapular eruption affecting the face and arms. Few truncal lesions.

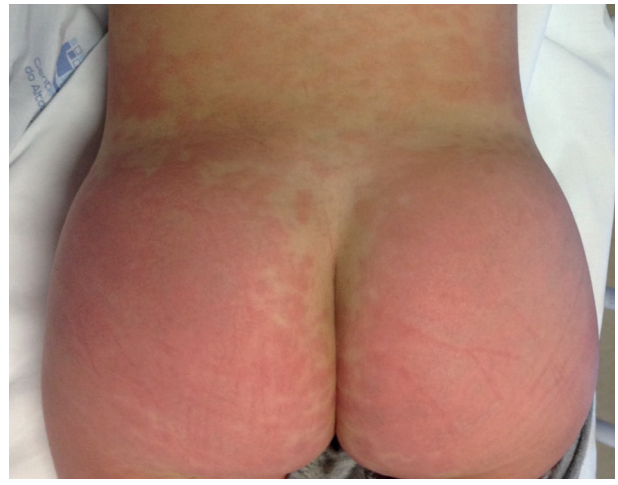

Figure 2. Maculopapular eruption on the buttocks of the child.

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illness.[2] Although originally described in association with HBV infection, a number of other pathogens have been reported to be inciting factors, including EBV, CMV, HIV, enteroviruses, parvovirus, parainfluenza virus, hepatitis A virus, rotavirus, respiratory syncytial virus, human herpesvirus 6 (mainly 6B), beta-hemolytic streptococci and *Mycoplasma pneumoniae*.[1-4] The pathogenesis of Gianotti-Crosti syndrome, including the acral distribution of lesions, is unknown. It is proposed that viruses or circulating immune complexes are the cause of the cutaneous findings, resulting from delayed hypersensitivity reaction of the cells. The significance of IgE mediated immunity is also being investigated.[2,3]

Diagnosis is clinical and there are no characteristic laboratory features. Differential diagnosis includes erythema *infectiosum*, erythema multiforme, papular urticaria, lichen *planus*, acrodermatitis enteropathica and, less common, Henoch-Schönlein purpura and Kawasaki disease. The treatment is supportive, and no follow-up is necessary except for children with Gianotti-Crosti syndrome due to HBV infection or with persistently elevated liver enzymes. Generally, the course of Gianotti-Crosti syndrome is benign, and the prognosis is good.[1-5]

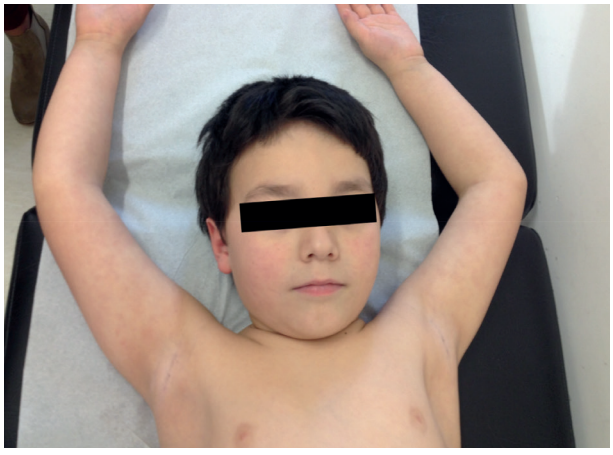

Figure 3. Child's reevaluation 10 days after inaugural episode showing cutaneous lesions resolution.

Keywords: Acrodermatitis/diagnosis; Acrodermatitis/etiology; Acrodermatitis/therapy; Child; Diagnosis, Differential; Mycoplasma pneumoniae; Pneumonia, Mycoplasma

WHAT THIS REPORT ADDS

- Diagnosis of Gianotti-Crosti syndrome should be considered in the presence of a sudden symmetrically distributed papular or papulovesicular eruption in a young child involving mainly the face, buttocks and extremities.
- Gianotti-Crosti syndrome usually occurs in association with a viral illness but other pathogens, including *Mycoplasma pneumoniae,* may be implicated.
- Laboratory investigations are not helpful in establishing the diagnosis but may be necessary to determine the etiology or to exclude other conditions, particularly if the eruption or course is atypical.
- Complications are rare and usually related to the underlying etiology.

Conflicts of Interest

The authors declare that there were no conflicts of interest in conducting this work.

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Consent for publication

Consent for publication was obtained.

Confidentiality of data

The authors declare that they have followed the protocols of their work centre on the publication of patient data.

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