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LETTERS TO THE EDITOR

Infantile Acrodermatitis of Gianotti-Crosti and Lyme Borreliosis

Sir,

We report two cases of unusual connection between infantile papular acrodermatitis (Gianotti-Crosti syndrome (GCS)) and Lyme borreliosis (LB), a spirochaetal disease transmitted by tick bites and caused by *Borrelia burgdorferi* (Bb).

CASE REPORTS

Case 1. A 15-month-old boy, affected with multiple erythema chronicum migrans (ECM), was seen by dermatologists in Forlì (Italy) in August 1994. The disease was localized on the lower limbs, with four annular erythematous lesions, two of which had erythematous plaques at their centres (tick granulomas). Constitutional symptoms (pharyngodynia, mild fever, asthenia and malaise) were present. Serology for Bb (ELISA and Western blot) was strongly positive for IgM and weakly positive for IgG. The patient was treated with Ceftriaxone at a dose of 500 mg im/day for 30 days with good results. Four months later the patient was seen again because an eruption characterized by pin-sized discrete flesh-coloured papules localized on the limbs, buttocks and cheeks had appeared (Fig. 1). Mild pruritus, unrest and latero-cervical lymphnode enlargement followed, whereas fever and pharyngodynia had preceded the skin symptoms. Histopathology was aspecific. Serology showed high IgG and IgM titers to Bb and low IgG EBNA titers to Epstein-Barr virus (EBV). The patient had not received any vaccination in the previous 6 months. The diagnosis of GCS was made. As the low titers were not convincing for recent EBV seroconversion (false positivity during Bb infection?) and high titers to Bb were present, we thought that GCS might be due to Bb. The skin eruption spontaneously cleared up in 6 weeks with slight scaling. Now the patient is in good health.

Case 2. An 18-month-old boy was seen by dermatologists in Trieste (Italy) in February 1995. He presented an eruption characterized by pin-sized, flat, non-pruritic, discrete, erythematous papules, distributed on the limbs and the buttocks. Axillary and inguinal lymphadenopathy was present. In May 1994 the patient received a tick bite, and 2 weeks later he got a flu-like syndrome characterized by fever and polyarthralgia. In August 1994 he underwent anti-B hepatitis vaccination. Bb serology showed high titers for IgG (ELISA), and Western blot was positive, whereas IgM antibodies to Bb were absent. Viral serology (EBV, cytomegalovirus, coxsackievirus, enterovirus, rotavirus) was negative. Anti-hepatitis antibodies were highly positive, as a consequence of the previous vaccination. On the grounds of the clinical symptoms, the diagnosis of GCS was made. As Bb antibodies were positive, a treatment with oral Josamicin (250 mg/day for 14 days) was given. Since the skin eruption cleared up and the lymphnodes regressed to their normal size within 3 weeks, we suspected that the antibiotic therapy might have contributed to the course, shorter than normal.

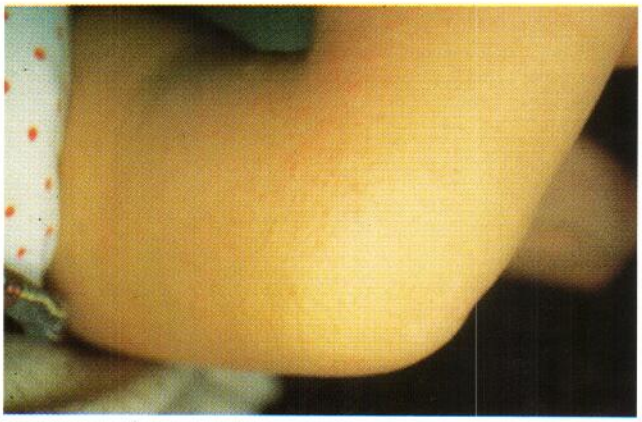

Fig. 1. Infantile papular acrodermatitis on the upper limb.

DISCUSSION

The etiology of papular acrolocated diseases of childhood has not been completely explained. It has been reported that GCS occurs during viral infections and/or after vaccinations, diarrhoea and upper respiratory tract disturbances (1,2). We report that both patients had typical infantile papular acrodermatitis which was preceded by upper respiratory tract illness and fever; they did not present clinical changes of hypocondriac organs, whereas serology for hepatitis A and C was negative. The second patient showed high antibody titration to B-hepatitis as a proof of previous vaccination. In the first patient the low titration of EBV serology might have occurred because of previous but not recent contact with EBV (or it might be a false positivity during Bb infection). Noose test was negative, so we could exclude GCS. Other viral serologies, such as cytomegalovirus, coxsackievirus, enterovirus and rotavirus, were negative in both patients.

On the other hand, we observed that recent infections, due to Bb, were well documented. The first subject had annular lesions with tick granulomas, signs of an early stage of LB (3), and constitutional symptoms. A history strongly evocative of Bb infection was present in the second patient (previous tick bite, constitutional symptoms and arthralgia) and the antibiotic treatment seemed to have shortened GCS. Both patients live in areas endemic for LB, close to forests rich in wild animals (like deer, roe-deer and foxes). Both, moreover, showed laboratory tests markedly positive to Bb (the former IgM and IgG and the latter IgG).

On the basis of these observations, we expressed the hypothesis of a possible clinical correlation between GCS and LB. It is possible that Bb infection might cause immunologic reactions, such as GCS, by itself or with other immunostimulating events, such as vaccinations or viral infections (1,2). We suggest that clinicians should include anamnestic, clinical and serological Bb investigations for patients suffering from GCS, to specify the role of Bb in infantile papular acrodermatitis.

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