Gianotti-Crosti Syndrome in an Adult after Influenza Virus Vaccination

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Gianotti-Crosti syndrome is a distinctive self-limited cutaneous response to viral infections characterised by the onset of a nonrecurring, erythematous, papular rash on the face, limbs and buttocks [1, 2]. It affects children, with the highest incidence occurring between 1 and 6 years of age [1-3].

Several different viruses are held responsible for the eruption [2-5]. We recently observed an adult patient who developed Gianotti-Crosti syndrome following influenza virus vaccination. A 28-year-old female patient in good general health was referred to us in November 1993 for a papular rash. The patient was employed as an assistant in a dental care unit. For this reason, she was submitted in 1992 to blood tests and was discovered to have had an asymptomatic B virus hepatitis. Her medical history was otherwise unremarkable. She had not suffered from any infectious or inflammatory disorder during the months preceding the onset of the cutaneous eruption but had had influenza virus vaccine (Biaflu Zonal®, Biagini) injected into her deltoid muscle 4 days before papular lesions appeared on her upper limbs.

At clinical examination, the cutaneous eruption was symmetrically distributed on the face, upper limbs, buttocks and lower limbs. The trunk and flexural folds were not affected. The lesions were monomorphic, slightly erythematous and pruritic, non-coalescent papules, 2 mm in diameter, with a purpuric hue on the lower limbs. Lymphadenopathy and hepatomegaly were absent, and mucous membranes were not affected.

The rash completely disappeared within 3 weeks. Routine laboratory tests including complete blood cell count, protein electrophoresis, electrolytes, urea, transaminases and other liver enzymes showed normal values, except for total bilirubin (1.0 mg/dl, and 1.7 mg/dl 1 month later; normal range: 0-1 mg/dl). Viral serology was performed at the onset of the cutaneous disease and 1 month later. No antibodies against Epstein-Barr and hepatitis C virus were detected nor were immunologic signs of recent infection with cytomegalovirus, parvovirus, herpes simplex and varicella-zoster virus found. HBs antigen was absent, while anti-HBs and anti-HBc antibodies were present; antibodies against toxoplasma were also absent.

Both morphology and evolution of the eruption in our patient were similar to those observed in the classical juvenile form of Gianotti-Crosti syndrome. The occurrence of this disorder in adult patients is very uncommon. Despite occasional mentions [1,6], only 7 patients were well

documented in the literature [7-11]. In all but one an association with acute HBsAg-positive icteric hepatitis was found, leading to the conclusion that papular acrodermatitis of the adult is always the forerunner of a B virus hepatitis [10].

Our patient had an asymptomatic B virus hepatitis in the past and was anti-HBsAg positive 1 year before developing the papular eruption. Although she clearly had Gianotti-Crosti syndrome, hepatitis B virus could not be incriminated, and available viral serologic tests failed to determine another causative agent. Involvement of the influenza virus in papular acrodermatitis has never been re-

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ported. The woman had had the inactivated influenza virus injected 4 days before the onset of the rash: even if the causative role of the vaccination could not be proved, its possible action in triggering the disease cannot be ruled out.

The actual pathogenic mechanism of Gianotti-Crosti syndrome remains unclear, even though a virus-induced type IV cutaneous hypersensitivity has been suggested [12]. Individual characteristics of the patient are held important for the development of the disorder [2]. Causes other than hepatitis B may trigger the cutaneous lesions in adults as well as in children.

Undoubtedly, the complex Gianotti-Crosti syndrome/B virus hepatitis is becoming rare in adult patients, too.

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Confluent and Reticulated Papillomatosis: Response to Topical Calcipotriol

Confluent and reticulated papillomatosis (CRP) is a relatively rare disease manifested by grayish-brown verrucous papules localized to the intermammary and interscapular regions [1]. The papules coalesce into plaques and those at the periphery spread out and form a pigmented reticulated pattern. The cause of the disease has not been clarified, however, 'a genetically determined defect of keratinization' could be an explanation [2].

Calcipotriol has been found effective in diseases of keratinization [3]. This prompted us to employ calcipotriol in a patient with CRP.

A 25-year-old white female patient was referred for a 1-year history of slightly itchy skin lesions on the trunk. Family history was

negative for similar lesions. Dermatologic examination disclosed 3- to 4-mm-sized flat-topped, red-brown keratotic papules that formed plaques in a reticulated manner in the intermammary region, abdomen and interscapular area. The mucous membranes and other skin areas were free of lesions. Histo-pathologic examination of a 5-mm punch biopsy specimen disclosed epidermal hyper-keratosis, a decrease in granular layer and thinning of the rete ridges which were consistent with a diagnosis of CRP. Laboratory investigations revealed normal findings. A potassium hydroxide preparation was negative for *Pityrosporum orbiculare*.

The patient was started on calcipotriol ointment (50 µg/g) with twice-daily application and at doses of 100 g/week. Baseline serum adjusted calcium was 2.28 mmol/l (normal range 2.25-2.55 mmol/l). Regular calcium measurements were repeated on days 15 and 30 of the treatment and were found 2.40 and 2.54 mmol/l, respectively. The lesions subsided and showed considerable improvement within 4 weeks. The patient did not show any flare-ups, and was lesion free 1 month after the treatment. Serum-adjusted calcium level assessed 2 weeks after discontinuation of calcipotriol ointment was 2.50 mmol/l.

CRP was first described by Gougerot and Carteaud [1] in 1927. Females and obese blacks are more prone to the disease. The etiology is unknown; however, an association

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