Henoch-Schönlein Purpura and Human Parvovirus B19

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Human parvovirus B19 (HPV B19) was discovered in 1975 by Cossart et al. [1]. In 1983 Anderson et al. [2] demonstrated that this virus is the aetiological agent of erythema infectiosum ('fifth disease'). Since then, various skin manifestations have been associated with HPV B19 [3]. In particular, some cases of purpuric lesions have been reported, among whom 2 children with Henoch-Schönlein purpura (HSP) [4, 5].

We present a case of HSP associated with primary infection by HPV B19 in an adult patient. A 46-year-old woman was admitted to our Institute because of an erythematopurpuric dermatitis on the abdomen and lower limbs as well as arthritis of the wrists, hands and ankles.

The patient stated that about a week earlier fever (up to 38 °C) had unexpectedly appeared, followed 4 days later by skin and joint manifestations. Furthermore, the patient reported that she had not been on any medication.

Clinical examination revealed erythematopurpuric lesions on the abdomen and lower limbs; these lesions were round, of different size, isolated or confluent, dark red in colour, with irregular margins. The lesions were asymptomatic. The skin covering the joints of the wrists, fingers and ankles was both erythematous and oedematous; these joints were intensively painful on palpation and movement. The tonsils and the pharynx were erythematous. On palpation the abdomen was painful. In the left groin a mobile lymph node was felt: it had a parenchymatous consistency, was tender and covered by healthy skin.

Laboratory tests revealed an increase in erythrocyte sedimentation rate (38 and 59 mm, respectively, at the first and second hours), in PCR (1.4 mg/dl), in α_2 -glycoprotein (138 mg/dl) and a reduction in C4 (11 mg/dl). Urine examination showed the presence of proteinuria (50 mg/dl) and both red and white blood cells in the sediment. The search for occult blood in the faeces was positive. Finally, ELISA for anti-HPV-B19 IgM was positive. All the other laboratory tests were either negative or within normal ranges.

The patient was treated with nimesulide (100 mg/day orally for 10 days). Arthritis regressed in 7 days, while the skin lesions took about 2 weeks. Laboratory examinations returned to normality in 7 days. Anti-HPV-B19 IgG was positive after 30 days.

Purpuric manifestations associated with HPV B19 infection can be schematically classified as: (a) idiopathic thrombocytopenic purpura [6-10]; (b) vascular purpura [4, 11-18]; (c) papular-purpuric glove-and-sock syndrome [19-21]; (d) vasculitis [17, 22], and (e) HSP [4, 5]. As far as the latter is concerned in the literature there are reports on 2 children who presented with a similar clinical picture, characterized by petechiae on the lower limbs, arthralgia of the wrists, knees and ankles and abdominal pain [4, 5]. In 1 case there was also bloody vomiting, rectal

haemorrhage and proteinuria [5]. Furthermore, Schwarz et al. [17] described 2 children with HSP in whom, however, clinical manifestations were partial or atypical. In fact, 1 patient presented with diffuse petechiae, lymphadenitis and fever, and the other patient had petechiae in the perianal region and dorsum of the feet, and fever. The case we have just described was diagnosed as HSP because of the simultaneous involvement of the skin (purpura), joints (arthritis), intestine (abdominal pain and positive occult blood in the faeces) and kidneys (proteinuria and haematuria). Apart from the positivity of specific anti-HPV-B 19 antibodies, the presence of fever, pharyngo-tonsillitis and lymphadenopathy is also significant, all of which are frequent findings seen in HPV B19 infections [3]. Most likely this case represents the first example of HSP associated with HPV B19 infection in an adult patient. On the basis of literature data and our experience, we suggest that tests be carried out to look for specific anti-HPV-B 19 antibodies in all patients with purpuric lesions, including adults.

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