

Papular-purpuric Gloves and Socks Syndrome

Sir,

We have recently seen a case of papular-purpuric gloves and socks syndrome (PPGSS). We present our observations of the clinical picture and our views on the aetiology of this rare dermatitis in the light of literature data.

CASE REPORT

In June 1993, a 42-year-old woman was admitted to our Institute suffering from an itching and painful dermatitis localized to the hands and feet. The patient reported that the dermatitis had appeared a week before, followed by fever (up to 38°C) 3 days later. The patient denied intake of drugs.

Dermatological examination revealed the presence of oedema of the hands and feet, with isolated or confluent erythematous-papular-purpuric lesions; they were round, a few millimeters in diameter, terminating in the proximity of the wrists and ankles (Fig. 1). An intense oedema of the lips was observed.

General examination revealed a latero-cervical and axillary lymphadenopathy. Laboratory tests and instrumental investigations were all within normal ranges. The assay for anti-human parvovirus B19 (HPV B19) antibodies showed the presence of IgG, while IgM proved negative.

Skin manifestations, fever and lymphadenopathy regressed spontaneously within 2 weeks. Subsequent controls of anti-HPV B19 antibodies confirmed the presence of IgG and the absence of IgM.

DISCUSSION

PPGSS is a rare dermatitis that was first described in 1990 by Harms et al. (1). Up to now, only 13 cases have been published (1–5), 10 of these by Harms et al. (1, 4). The syndrome strikes almost exclusively young Caucasian adults of both sexes during the spring.

The syndrome may be preceded by ingestion of various drugs, the aetiological role of which is very doubtful (1), and by a prodromic phase characterized by asthenia, anorexia and fever (1). Subsequently, pruritic oedema and erythema appear, symmetrically localized to the hands and feet in a glove and sock distribution. At the same sites painful erythematous-papular-purpuric lesions, of a few millimeters in diameter, and not extend-



Fig. 1. Erythematous-papular-purpuric lesions on the palmar surface.

ing beyond the wrists and ankles, develop. These manifestations have been described in all patients; in some cases similar lesions have also been observed on the cheeks, elbows, flanks, inguinal region, glans penis, back, thighs and knees (1). Cutaneous lesions are often accompanied by polymorphous lesions in the oral cavity: pharyngitis (1), vesicles (1) or petechiae (3) of the soft palate, coated tongue (1), oedema of the tongue and lips (3), erosions of the lips (1, 3), angular cheilitis (1), aphthae of the labial mucosa (1).

Among systemic manifestations, fever, usually appearing 2–4 days after the onset of skin lesions, and lymphadenopathy may occur.

Laboratory examinations have shown leucopaenia (1, 3), neutropaenia (1), eosinophilia (1), monocytosis (1), plasmacytosis (1), thrombocytopaenia (2) and rise in SGOT (3).

The syndrome resolves spontaneously in 1–2 weeks. There are no reports in the literature in regard to any recurrences.

As far as the aetiology is concerned, Harms et al. (1, 6) had already in 1990 advanced the hypothesis that PPGSS may be caused by an infective agent. In 1991 Bagot & Revuz (2) demonstrated in one patient an association with a primary infection caused by HPV B19, an observation which has subsequently been confirmed by Halasz et al. (3). Furthermore, Harms et al. (4) recently found a positivity for HPV B19 in 3 of 5 patients with PPGSS: in one patient HPV B19 infection was confirmed by PCR in the serum and the skin; in the other 2 patients, one of whom was affected by AIDS, anti-HPV B19 IgG antibodies were already present at the time when the eruption occurred, and specific IgM antibodies appeared later. These results, however, have not been confirmed by other authors (5, 7), and even in our patient we found only the presence of anti-HPV B19 IgG. Of the 13 cases published so far, the association with a primary HPV B19 infection was shown in 5 cases (2–4). PPGSS is not, therefore, associated in all patients with a primary infection due to HPV B19 (8). Furthermore, no other virus has been demonstrated to be capable of causing this disorder. For these reasons we believe it would be more correct to use the term "papular-purpuric gloves and socks disease" (PPGSD) for the kind of dermatitis which is associated with a primary HPV B19 infection (or associated with another primary viral infection) and "papular-purpuric gloves and socks syndrome" (PPGSS) for that kind in which the aetiology is unknown.

Differential diagnoses include erythema multiforme, hand-, foot- and mouth-disease, papular acrodermatitis of childhood (Gianotti-Crosti syndrome), rickettsiosis and Kawasaki disease in adults.

After this manuscript has been accepted for publication, three papers have been published (9–11).

REFERENCES

1. Harms M, Feldmann R, Saurat J-H. Papular-purpuric "gloves and socks" syndrome. *J Am Acad Dermatol* 1990; 23: 850–854.
2. Bagot M, Revuz J. Papular-purpuric "gloves and socks" syndrome:

- primary infection with parvovirus B19? *J Am Acad Dermatol* 1991; 25: 341.
- Halasz CLG, Cormier D, Den M. Petechial glove and sock syndrome caused by parvovirus B19. *J Am Acad Dermatol* 1992; 27: 835-838.
 - Harms M, Feldmann R, Kinloch S, Borradori L, Saurat JH. Papular-purpuric "gloves and socks" syndrome: a new entity role of the parvovirus B19. Abstract #791 Congress "Dermatology 2000"; Vienna, 1993; 290.
 - Trattner A, David M. Purpuric "gloves-and-socks" syndrome: histologic, immunofluorescence, and polymerase chain reaction study. *J Am Acad Dermatol* 1994; 30: 267-268.
 - Harms M, Feldmann R, Saurat J-H. Papular-purpuric "gloves and socks" syndrome: primary infection with parvovirus B19? Reply. *J Am Acad Dermatol* 1991; 25: 341-342.
 - Trattner A. Primary infection by human parvovirus B19. *Dermatology* 1994; 188: 169.
 - Veraldi S, Rizzitelli G. Primary infection by human parvovirus B19. Reply. *Dermatology* 1994; 188: 169.
 - Feldmann R, Harms M, Borradori L, Saurat J-H. Syndrome papulo-purpurique "en gants et chaussettes". *Ann Dermatol Venereol* 1993; 120: 810-2.
 - Feldmann R, Harms M, Saurat J-H. Papular-purpuric 'gloves and socks' syndrome: not only parvovirus B19. *Dermatology* 1994; 188: 85-7.
 - Bessis D, Lamaury I, Jonquet O, Segondy M, Janbon F. Human parvovirus B19 induced papular-purpuric "gloves and socks" syndrome. *Eur J Dermatol* 1994; 4: 133-4.

Received February 4, 1994.

Stefano Veraldi and Gaetano Rizzitelli
Institute of Dermatological Sciences
University of Milan
Via Pace, 9
20122 Milan
Italy