Purpuric lesions: recognizing signs of severity

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Abstract
Dermatological diseases that manifest with purpuric lesions may be difficult to diagnose. An accurate clinical history and the recognition of the clinical characteristics of the cutaneous lesions of each dermatosis allow the correct diagnosis and implementation of adequate therapy. We report the cases of three patients with different diseases who presented with purpuric lesions and challenge the reader to make the diagnosis.

Keywords:
Dermatology, Child, Henoch–Schönlein Purpura, Meningococcal infection.

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Select the best answer among the following:

A) Meningococcemia  
B) Child abuse  
C) Henoch–Schönlein purpura  
D) Phytophotodermatitis  
E) Acute hemorrhagic edema of infancy

CASE 1

A 5-year-old boy presented with pain in the left knee that limited his walking. Papules and palpable purpuric plaques appeared on the lower limbs, bilaterally, (Figure 1), 2 days later, associated with vomiting and abdominal pain. Laboratory tests showed mild leukocytosis, without thrombocytopenia or coagulation abnormalities, and there was hematuria in a partial urinalysis.

ANSWERS
CASE 1

The answer is C: Henoch–Schönlein purpura. It is the most common vasculitis during infancy, with higher incidence between 4 and 6 years of age. An upper respiratory tract infection triggers immunoglobulin A deposition on the walls of small vessels, primarily in the skin, joints, bowel, and kidneys. It manifests with the appearance of palpable purpuric lesions that affect mainly the buttocks and the lower limbs bilaterally, with a linear distribution in sites of greater pressure, such as:

Figure 1. Papules and purpuric plaques on the legs with a linear distribution in the sites of greater pressure (elastic cuffs of the socks).

Figure 2. Well delimited papules and purpuric plaques, some coalescent, on the lower limbs of the infant.

Figure 3. Purpuric papules of varying sizes and petechiae on the lower limbs of the infant.
the cuffs of socks (Figure 1). Pain and edema in the joints of the legs limit walking, but there are no sequelae after disease resolution. Abdominal pain is less frequent and is occasionally associated with vomiting. The most common complication is glomerulonephritis, and renal function monitoring is indicated for 6 months after the onset of symptoms. Clinical and laboratory findings aid in the exclusion of thrombocytopenic purpura.

CASE 2
The answer is E: Acute hemorrhagic edema of infancy. It is a rare small-vessel vasculitis that affects children between 4 and 24 months of age. It manifests with low fever, edema of the face and extremities, and purpuric lesions of 1–5 cm that are mainly located on the lower limbs (Figure 2), buttocks, and face. Lesions located in the helix of the ear are typical for this condition. Despite the alarming appearance of the lesions, the general health of the child is good, and treatment is not required. Vasculitis occurs rarely in organs other than the skin. Unlike in Henoch–Schönlein purpura, the child does not exhibit arthralgia, abdominal pain, or renal involvement, and follow-up after disease resolution is not necessary. The diagnosis is clinical, and the laboratory findings are nonspecific.

CASE 3
The answer is A: Meningococcemia. It is the most severe meningococcal disease caused by the reaction of microvessels to the endotoxins from Neisseria meningitidis. After the meningococcal conjugate vaccine was introduced, there was a gradual reduction in the incidence of the disease. Transmission occurs via contact with respiratory secretions, and the incidence is higher among children aged up to 5 years, especially among those aged less than 1 year, and in adolescents. It presents with petechiae and purpura disseminated over the trunk and extremities, associated with septic shock and coagulation abnormalities. Skin lesions appear a few hours after the onset of fever, as in the case reported herein, and may be accompanied by prostration and irritability. The quick onset of signs and symptoms and general health deterioration differentiate this disease from Henoch–Schönlein purpura or acute hemorrhagic edema of infancy. The diagnosis is confirmed by a culture of cerebrospinal fluid and/or blood, which should be collected before initiating antibiotic therapy. The identification of cutaneous lesions allows early diagnosis and treatment initiation, improving the prognosis. Third-generation cephalosporins are the first-choice for therapy when there is no confirmed sensitivity to penicillin. Chemoprophylaxis is indicated for family members and those in close contact.

REFERENCES