An explosive reaction to a spider-bite
Une réaction explosive à une morsure d’araignée

Spider-bites are not uncommon in the Mediterranean Region and have previously been described as triggers of severe but rare cutaneous reactions such as acute generalised exanthematous pustulosis (AGEP) that are commonly associated with medication [1]. The following case illustrates an unusual presentation associating AGEP and necrotizing vasculitis consecutive to a spider-bite.

Case report

A 66-year-old male Caucasian patient was admitted in May 2011 to the Department of Infectious Diseases for a febrile maculopapular, nonpruritic rash that appeared 2 days subsequent to a spider-bite on the right hand and spread to the torso and thighs. The patient suffered from general asthenia, anorexia and reported arthromyalgia. Physical examination on admission was otherwise unremarkable. There was no evidence of necrotic skin lesions typical of spider-bites. Medical, social and family history was irrelevant to the case. The patient lived in the suburbia of Nice (Southern France) and did not take any treatment. There were no indications of any underlying disease.

On the ninth day, however, several pinhead-sized non-follicular pustules were noted on the forearms and later covered the rest of the body (figures 1 and 2). Fever that peaked at 39–40 degrees Celsius was badly tolerated and the patient complained of a general persistent burning sensation as well as muscular pain. Widespread skin desquamation occurred 5 days later. Muscular pain was aggravated by the mobilisation of the limbs. Muscular force was evaluated at 2/5 on the MRC scale but there was no other objective neurological deficit.

Initial laboratory tests showed C-reactive protein of 305 mg/L, leucocytes at 31.1 G/L with 88% neutrophils, haemoglobin at 12.2 g/dl, platelets at 229 G/L. Kidney function was impaired (creatinine concentration was 142 μmol/L, GFR of 47 mL/min) with proteinuria of 1.27 g/24 h but normal urinalysis. Creatinine phosphokinase levels were normal. C4 fraction levels of the complement were low at 0.15 g/L and TH50 at 50%. Cryoglobulin and perinuclear antineutrophil cytoplasmic antibodies (ANCA) were absent. Antinuclear factors were negative. Extensive microbiology tests (including serology for hepatitis virus, EBV, Rickettsia, parvovirus B19 and HIV) appropriately conducted were unremarkable. Electromyography showed signs of myositis but did not document neuropathy.

Discussion

The dermatological problem was identified as acute generalised exanthematous pustulosis (AGEP) with typical histopathology that showed subcorneal pustules, spongiosis and eosinophil exocytosis. AGEP is a rapid eruption of many sterile non-follicular pustular lesions with erythema and is accompanied by fever and neutrophilia. It is usually drug-induced (in 90% of cases), occurring within 10 days of intake – with antibacterials being the most frequent triggers [1]. This was not the case in our patient who received only acetaminophen and had not shown prior reaction to this medication. AGEP has been previously described after spider-bites by the *Loxosceles* species, endemic in the Mediterranean Region [2,3]. Overall prognosis is generally good and lesions resolve spontaneously within 4 to 10 days with desquamation [1]. The muscular signs and renal insufficiency suggested associated systemic vasculitis. Muscular biopsy identified signs of necrotising vasculitis of medium-sized arteries with intimal hyperplasia and was diagnostic of periarteritis nodosa (PAN).

The patient was treated with high-dose oral corticosteroids resulting in rapid clinical improvement. Corticosteroid therapy was gradually decreased and the patient fully recovered. PAN is a necrotizing vasculitis of the medium and small muscular vessels and generally consists in multiorgan failure.

![Figure 1](https://www.em-consulte.com/revue/lpm/LPM-2352)

**Figure 1**
Many sterile non-follicular pustular lesions with erythema
Clinical manifestations according to American College of Rheumatology criteria include weight loss of more than 4 kilograms, livedo reticularis, testicular pain, myalgias, weakness, neuropathy, increased diastolic blood pressure, renal failure and abnormal arteriography or artery biopsy. Until now, known triggers of PAN were viral (with a common association with hepatitis B) or bacterial infections [4]. Large vessel vasculitis resembling PAN has been described in animal models injected with Loxosceles venom [5].

To our knowledge, this is the first description of a case associating PAN-like signs and AGEP following a spider-bite. Our patient showed signs of an intense inflammatory reaction triggered by the spider-bite (though the species was not officially identified) and outcome was favourable with corticosteroid therapy. This case illustrates the secondary nature of PAN and its possible association with AGEP.

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**References**


