

# ACTAS

## Dermo-Sifiliográficas

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### CASE FOR DIAGNOSIS

## Papules and Plaques Grouped on the Pectoral Region of a Patient with Hepatitis C Virus Infection

### Pápulas y placas agrupadas en la región pectoral en un paciente con infección por el virus de la hepatitis C

#### Medical History

A 41-year old man, a previous parenteral drug user with negative serology for human immunodeficiency virus, and hepatitis B and C (HCV) viruses 1 year earlier, consulted for the progressive appearance of persistent asymptomatic lesions that had started to appear 6 months earlier in the left pectoral region; there were no accompanying extracutaneous symptoms. The patient reported no previous infection with herpes zoster.

#### Physical Examination

Physical examination revealed a group of fibrous, indurated, erythematous-violaceous papules and plaques in the area of the border between the upper quadrants of the left mammary region (Figure 1). Some lesions presented signs of deep bleeding. Palpation of the breast was normal, with no lymph node involvement and no organomegaly.

#### Pathology

Histology showed a proliferation of histiocytes with vesicular nuclei and abundant clear cytoplasm in the



Figure 1

dermis surrounded by bands of hyalinized collagen. There was a mixed inflammatory response formed of lymphocytes, plasma cells, and neutrophils, associated with dilation of the blood vessels and occasional hemosiderin deposits (Figure 2). The histiocytic cells were positive for S100 (Figure 3) and CD68, and were negative for CD1a and CD34; there was evidence of emperipolesis (Figure 3, arrows).

#### Additional Tests

Blood tests—electrolytes, liver and kidney function, protein electrophoresis, calcium, lactate dehydrogenase,  $\beta_2$ -microglobulin, erythrocyte sedimentation rate (ESR), complete blood count—and urinary sediment were normal. Recombinant immunoblot assay (RIBA) revealed HVC infection, and elevated cytomegalovirus (CMV) immunoglobulin (Ig) G antibodies and Epstein Barr Virus (EBV) IgG antibodies (with normal IgM antibody levels for both viruses). Computed axial tomography of the chest and abdomen was normal.

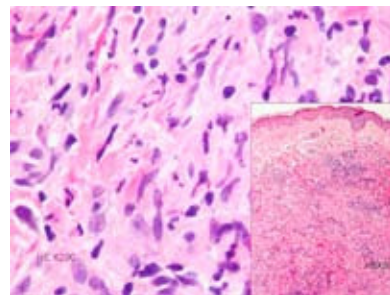


Figure 2 Hematoxylin-eosin, original magnification  $\times 200$ . Inset, hematoxylin-eosin, original magnification  $\times 20$

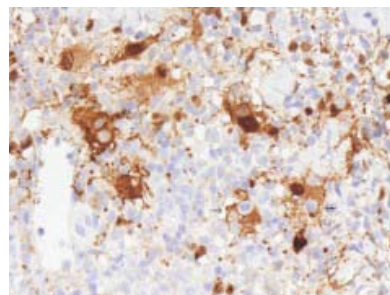


Figure 3 S-100, original magnification  $\times 40$ .

What Is Your Diagnosis?

## Diagnosis

Cutaneous Rosai-Dorfman disease.

## Course and Treatment

The lesions resolved slowly without treatment, with the occasional appearance of new lesions in the same region. The patient was lost to follow-up after 18 months.

## Comment

Rosai-Dorfman disease is a benign histiocytic-proliferative disease of unknown etiology.<sup>1</sup> The typical presentation is characterized by the appearance of lymphadenopathies mainly in the cervical region, fever, leukocytosis, elevated ESR, and hypergammaglobulinemia. Extranodal disease may be present, most commonly affecting the skin (43%). An exclusively cutaneous presentation (cutaneous Rosai-Dorfman disease) is very rare and, unlike the classic forms, is more prevalent amongst white women.<sup>2</sup> Clinical manifestations are varied, with 3 main recognized types: papulonodular (79.5 %), usually with multiple lesions; indurated plaque type (12.8%); and tumor type (7.7%).<sup>3,4</sup> Some lesions tend to ulcerate and lead to scarring. Histological study is essential for diagnosis, which is based on the presence of Rosai-Dorfman cells (found in 95% of cases); these cells are S100+ (100%), CD68+ (40-50%), and CD1a- (100%) and show emperipolesis (86%).<sup>3,6</sup> In cases of isolated emperipolesis, positivity for S100 can aid identification: the stain highlights the external membrane of individual histiocytes but not that of the phagocytosed cells (Figure 3, arrows).<sup>3</sup> The pattern of infiltration is nodular or diffuse in 76% of cases; in the remainder it may be patchy interstitial, suppurative granulomatous, or xanthomatous.<sup>6</sup> The types of associated cells vary, with the presence of plasma cells providing a useful clue in the histological differential diagnosis.<sup>6</sup> Thus, the key diagnostic histopathology finding is the presence of large, polygonal histiocytes that are S-100+ and CD1a- and show emperipolesis, and the presence of abundant plasma cells.

Although some lesions may heal spontaneously (32%), the majority persist for years.<sup>3</sup> Where the number and site of lesions makes this possible, the most effective treatment is surgical removal, although recurrence has been reported.<sup>3,6</sup> Radiotherapy, cryotherapy, topical and systemic corticosteroids, and thalidomide have also been used.

It has been suggested that a number of infections—mainly viral, such as EBV, human herpesvirus-6, herpes simplex, CMV, and varicella-zoster virus—may be involved in the etiology of this disease, which is characterized by the activation and proliferation of macrophages and

T lymphocytes.<sup>2,6,7</sup> No link has yet been found between HVC and Rosai-Dorfman disease and there have been only isolated case reports of HVC infection associated with reactive hemophagocytic syndromes, which have had a fatal outcome. The temporal relationship between the HCV infection and the appearance of Rosai-Dorfman skin lesions in our patient supports a possible relationship between the 2 diseases.

## Conflict of interest

The authors declare that they have no conflict of interest.

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