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ARTERITE MACULAR – A NOVA VASCULITE CUTÂNEA DOS VASOS DE MÉDIO CALIBRE

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RESUMO – **Introdução**: A arterite macular (AM) é a designação para um novo tipo de vasculite cutânea dos vasos de médio calibre, caracterizada clinicamente por máculas eritemato-violáceas ou acastanhadas, reticuladas e assintomáticas. A histopatologia revela uma arterite linfocitária. **Relato de caso**: Homem de 35 anos, caucasiano, sem hábitos tabágicos ou antecedentes pessoais relevantes, observado por erupção cutânea com dois meses de evolução, localizado no tronco e membros. Negava outras queixas e o exame fisíco geral foi normal. Ao exame físico dermatológico observavam-se múltiplas máculas eritemato-violáceas, assintomáticas e de configuração linear e reticulada. Colocou-se como principal hipótese de diagnóstico periarterite nodosa cutânea (PNC). A avaliação imagiológica e analítica não revelaram doença sistémica subjacente. O exame histológico demonstrou um vaso de médio calibre na junção entre a derme profunda e o tecido adiposo subcutâneo envolvido por infiltrado inflamatório predominantemente linfocitário e depósito de fibrina no lúmen, compatível com AM. **Conclusão**: A AM é uma vasculite cutânea pouco relatada na literatura, cujo diagnóstico é essencialmente histológico. Clinicamente, a PNC constitui o principal diagnóstico diferencial.

PALAVRAS-CHAVE – Arterite; Doenças da Pele.

MACULAR ARTERITIS – THE NEW CUTANEOUS MEDIUM-SIZED VESSELS VASCULITIS

ABSTRACT – ***Introduction:*** *Macular arteritis (MA) is the denomination for a new type of cutaneous medium-size vessels vasculitis, clinically characterized by erythemato-violaceous or brownish, reticulated and asymptomatic macules. Histopathological examination demonstrates a lymphocytic arteritis.* ***Case Report:*** *A 35-year-old Caucasian man, with no smoking habits or relevant medical history presented with a 2-months history of cutaneous eruption on his limbs and trunk. He denied other complaints and the general physical examination was regular. The dermatological examination revealed multiples nontender and erythematous-violaceous macules, with linear and reticulated configuration. Cutaneous periarteritis nodosa (CPN) was the main diagnosis proposed. Laboratory and radiological evaluation showed no underlying systemic disease. Pathological examination revealed a medium-sized vessel at the junction of the deep reticular dermis and the hypodermis, surrounded by a predominantly lymphocytic inflammatory infiltrate and fibrin deposits in the lumen, which were compatible with MA.* ***Conclusion:*** *MA is a poorly reported cutaneous vasculitis in the worldwide literature. The diagnosis is primarily histological and the CPN is the main clinical differential diagnosis.*

KEY-WORDS – *Arteritis; Skin Diseases; Hyperpigmentation.*

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INTRODUCTION

Vasculitis represents a specific pattern of inflammation of the blood vessel wall. It can affect small, medium-sized or large vessels. That's why, any organ system, including the skin, may be involved. The clinical features of cutaneous small vessel vasculitis include palpable purpura, urticarial lesions, petechiae and hemorrhagic macules or vesicules. In contrast to small vessel inflammation, medium-sized vasculitis typically presents with livedo *reticularis*, ulcers, subcutaneous nodules and digital necroses. When large vessel are involved, cutaneous alterations include tender nodules along the affected artery and, if there is ischemia, necrotic ulcers[1].

Macular arteritis (MA) is a newly described cutaneous medium-sized vessels vasculitis in which the clinical, laboratory and histological features are different from all the others types of vasculitis. Till now, only eight similar cases have been described in English literature, whose the differences are the terms coined by the authors[2-9]. This article reports another case of MA in a Caucasian Portuguese male.

CASE REPORT

A 35-year-old Caucasian Portuguese man presented with a 2-months history of an asymptomatic eruption on his lower extremities, preceded by an upper respiratory infection eight days before. The lesions spread gradually over his back, abdominal region and upper limbs. His personal and family medical history was not significant. He was not taking any medication and denied smoking habits. An extensive clinical evaluation produced negative findings for systemic complaints. General physical examination revealed a healthy man. Dermatological examination showed multiple, round, linear, reticular, nontender, ill-defined, erythematous--violaceous macules and patches, with variable sized in diameter, scattered over the lower and upper extremities and the trunk (Fig. 1).

Cutaneous periarteritis nodosa was the main clinical diagnosis proposed.

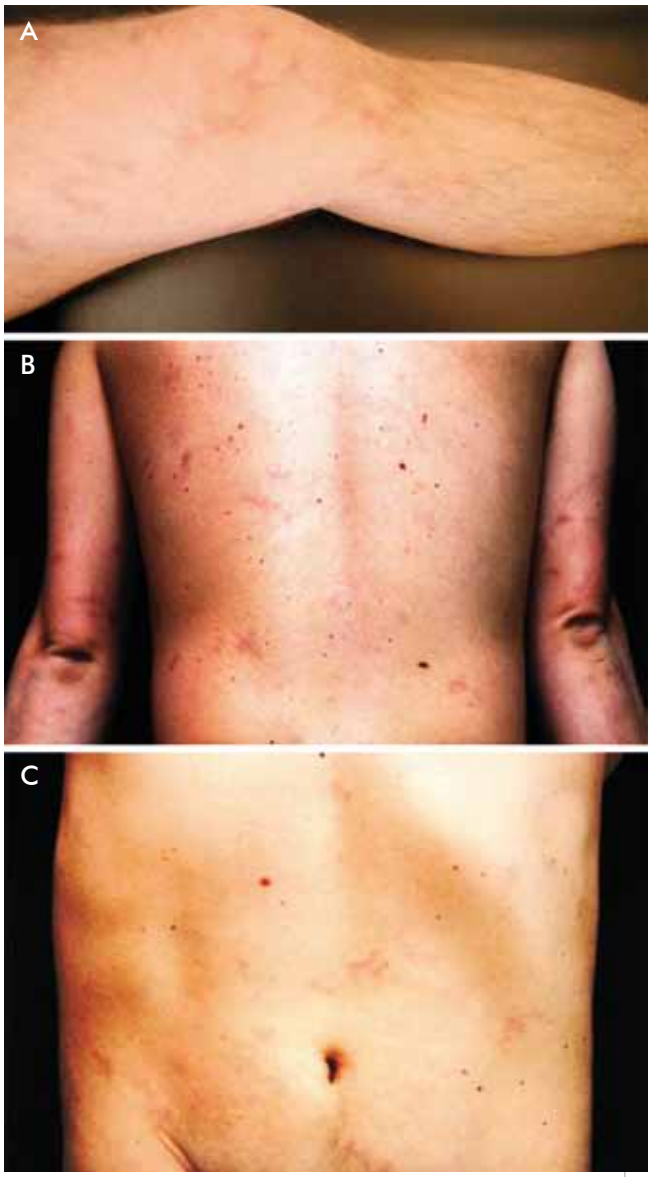

Fig. 1 - Multiple, round, linear, reticular, nontender, ill--defined, erythematous-violaceous macules and patches, scattered over the lower (a) and upper extremities (b) and the trunk (b, c).

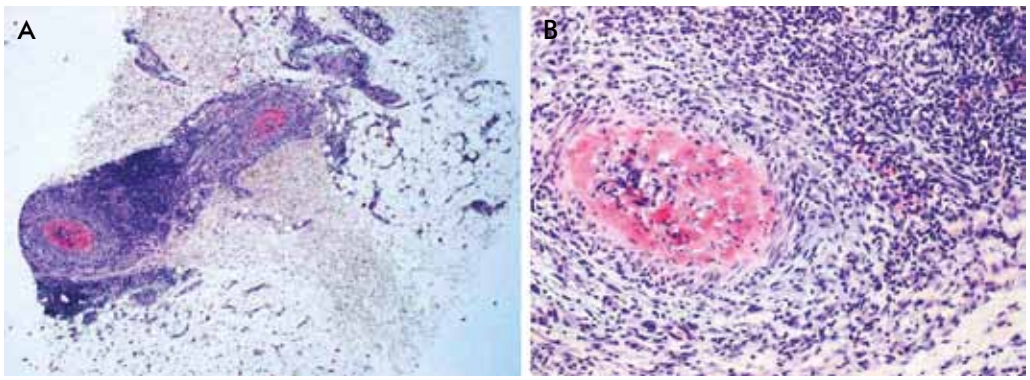

Fig. 2 - Lymphocytic vasculitis of a medium-sized vessel at the junction of the deep reticular dermis and the subcutaneous fat (a). Dense lymphocytic infiltrate around and within the vessel wall; thickening of the intimal and narrowing of the lumen by fibrinoid material (b). [Hematoxylin and eosin, 10x (a) and 40x (b)].

Extensive laboratory evaluation was performed and all the results were within the reference range (Table 1). Five skin biopsy specimens were obtained and only the last, which was the deepest one, showed the following particular findings (Fig. 2): the epidermis and dermis were regular; there were a predominantly lymphocytic infiltrate around and within the wall of a medium-sized vessel at the junction of the deep reticular dermis and the subcutaneous fat; very few neutrophils were observed; the vessel showed intimal thickening and its lumen was narrowed by a fibrinoid material; the orcein stain confirmed the arterioral nature of the vessel, which demonstrated an intact internal elastic lamina (Fig. 3); there were no fibrinoid necroses of the vessel wall, deposition of hemosiderin or melanin. All this findings were consistent with a newly described medium-sized vessel cutaneous arteritis named MA.

Low-dose acetylsalicylic acid was prescribed for 3 months, with no improvement. Five months later, the eruption persisted and no symptoms or change has been noted. Even though, it was decided to keep the patient in regular follow-up.

Table 1 - Radiological and laboratory evaluation.

System	Technique	Results
Hematologic	Complete blood count Differential platelet count Coagulation study Erythrocyte sedimentation rate C-reactive protein Serum and urine protein electrophoresis Cryoglobulins Cryofibrinogen Cold agglutinin Thrombophilia screening	Normal/ Negative
Liver	Liver funtion tests	Normal
Renal	Urea, creatinine and electrolytes Urinalysis	Normal
Immunologic	Hepatitis C serology Hepatitis B serology HIV serology Syphilis serology Antinuclear antibody Rheumatoid factor Anti-dsDNA Anti-SSA, anti-SSB, anti-Smith Antineutrophil cytoplasmic antibodies Complement levels C3, C4 and CH50	Normal/ Negative
Heart and pulmonary	Electrocardiogram Chest X-ray	Normal

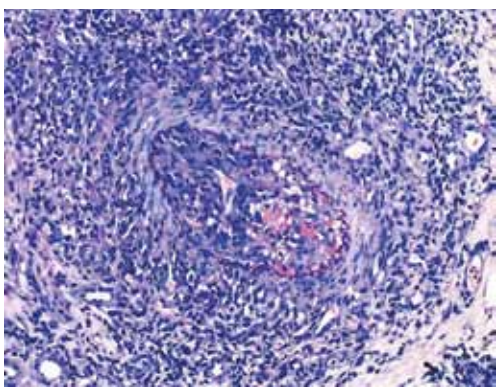

Fig. 3 - The arterioral nature of the vessel was confirmed with an elastic tissue stain. There was no elastic disruption. (Orcein stain, 10x).

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DISCUSSION

In 2003, Fein, *et al.*[2] reported three black patients with hyperpigmented and nontender macules over their lower extremities, which the histopathological examination revealed a lymphocyte-mediated arteritis at the junction of the deep reticular dermis and the subcutaneous fat. The Portuguese patient's clinical and histopathological findings are similar. "Macular arteritis" was the term he used for this newly recognized variant of cutaneous arteritis.

In 2008, Lee, *et al.*[4] related a series of five patients in which the clinical presentation were livedo *racemosa* and subtle subcutaneous indurations predominantly over their lower limbs. Despite the presence of some identical clinical alterations, the overall histological features were different from those observed in MA. He appointed this vasculitis "lymphocytic thrombophilic arteritis", to emphasize the role of lymphocytes in the development of a possible localized thrombophilia.

The etiology of MA is unknown. Sadahira, et al.[8] proposed that the cause of this cutaneous vasculitis is related to immunologic system events. In the opinion of Saleh, *et al.*[5], the role of drug and comorbidities in the etiology of MA is unlike. Until now, extensive laboratory evaluation has revealed positive antinuclear antibodies[3-5,8], elevated erythrocyte sedimentation rate[2-4], positive anti-Ro antibodies[5], mildly elevated liver function tests[5], positive anticardiolipin antibody titer[2,4], positive factor V Leiden gene R506Q mutation[4] and positive anti-β2-glycoprotein I antibody[4]. However, no connective autoimmune disease or other systemic involvement was observed, even after long follow-up period in some patients[2-9].

In general, MA presents with multiple, variably sized, hyperpigmented and less commonly hypopigmented, linear, reticular and erythematous or erythematous--violaceus macules, predominantly on the lower extremities[2,3,5-8]. The eruption is nonpalpable, nontender and indolent[2,3,5-8]. Others site of involvements include the upper limbs and the trunk[2]. Traditional vasculitis characteristics like ulceration, necrosis, erythematous nodules and palpable purpura are not present[2].

The clinical differential diagnosis of MA includes erythema dyschromicum perstans, drug-induced pigmentation, postinflammatory hyperpigmentation, pigmented purpuric dermatosis, secondary syphilis, mycosis fungoides and macular amyloidosis[2,5]. However, cutaneous periarteritis nodosa (CPAN) is the most important[5], being the unique clinical diagnosis proposed for the Portuguese patient. For Al-Daraji, *et al.*[7], MA represents an indolent and latent form of CPAN. The clinical, histological and serologic findings that characterize the MA allow to exclude all these clinical differential diagnosis.

The histological differential diagnosis of MA includes Degos disease, thromboangiitis obliterans (Buerger disease), Sneddon Syndrome and Kawasaki disease[5]. These entities are easily ruled out as they lack the histological alterations observed in MA. Like the Portuguese patient, all the obtained skin biopsies showed identical changes[2-9]: a normal epidermis and dermis; a dense lymphocytic infiltrate around and within the wall of a small artery at the junction of the deep reticular dermis and hypodermis; narrowing of the lumen by fibrinoid material along the luminal side and no evidence of vessel wall destruction, deposition of hemosiderin, melanin pigment incontinence or fat necrosis.

Until now, many treatments were prescribed for patients with MA (and lymphocytic thrombophilic arteritis), namely: topical clobetasol 0.5%[7]; prednisolone[4]; acetylsalicylic acid and clopidogrel[4]; acetylsalicylic acid and nifedipine[4]; prednisolone and hydroxychloroquine[3]; warfarin[4] and dapsone[3]. No benefit was noted.

In summary, macular arteritis is a benign condition with an indolent and chronic evolution. The cause is unknown. No systemic disease has been reported. CPAN is the most important clinical differential diagnosis. Definitive diagnosis is given by histological examination. Deeply skin biopsies should be obtained.

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