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Case Presentation

Multinucleate cell angiohistiocytoma: a new case report with dermoscopy

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Abstract

Multinucleate cell angiohistiocytoma (MCA) is a benign fibrohistiocytic and vascular proliferation usually located on the extremities. It may be underdiagnosed owing to lack of recognition by clinicians and pathologists. We report a 48-year-old man with asymptomatic grouped reddish papules on the dorsum of his right hand for 8 years. Histopathological and immunohistochemical examinations revealed features of MCA with a fibrohistiocytic cell infiltrate in the dermis and multinucleate cells in the stroma. Recently, the dermoscopy aspects of MCA have been described. We add another observation of this useful tool and correlate it with clinical evolution.

Key words: multinucleate cell angiohistiocytoma; multinucleate cells; dermoscopy

Introduction

Multinucleate cell angiohistiocytoma (MCA) is a rare idiopathic benign fibrohistiocytic and vascular proliferation usually presenting as multiple painless papules, red to violaceous in color, affecting acral surfaces. It was firstly described by Smith and Wilson Jones [1] in 1985 and fewer than 80 cases have been reported until now. MCA is probably underdiagnosed owing to lack of recognition by clinicians and pathologists.

Case synopsis

A 48-year-old healthy man presented with multiple well-circumscribed reddish papules grouped on the dorsum of the right hand (Fig. 1A). These lesions were painless and had developed insidiously for more than 8 years.

Dermoscopy revealed asymmetric and ill-defined lesions, with variable reddish areas and whitish patches, with discrete dotted vessels and an irregular surface with small ramified fissures (Fig. 2).

Microscopic examination disclosed slight hyperkeratosis and a discrete proliferation of small-sized blood vessels surrounded by a fibrohistiocytic cell infiltrate in the dermis (Fig. 1B). Strikingly, several multinucleate cells with scalloped borders occurred interspersed between the slightly thickened collagen bundles of the stroma. Blood capillaries were well differentiated and lined by bland CD34/CD31-positive endothelial cells. Stromal cells both multinucleated and mononucleated were positive for CD68 and negative for CD31, CD34, and S-100 protein. Mononucleated stromal cells additionally expressed lysozyme and alpha-1-antitrypsin immunoreactivity. The diagnosis of MCA was based on histopathologic examination.

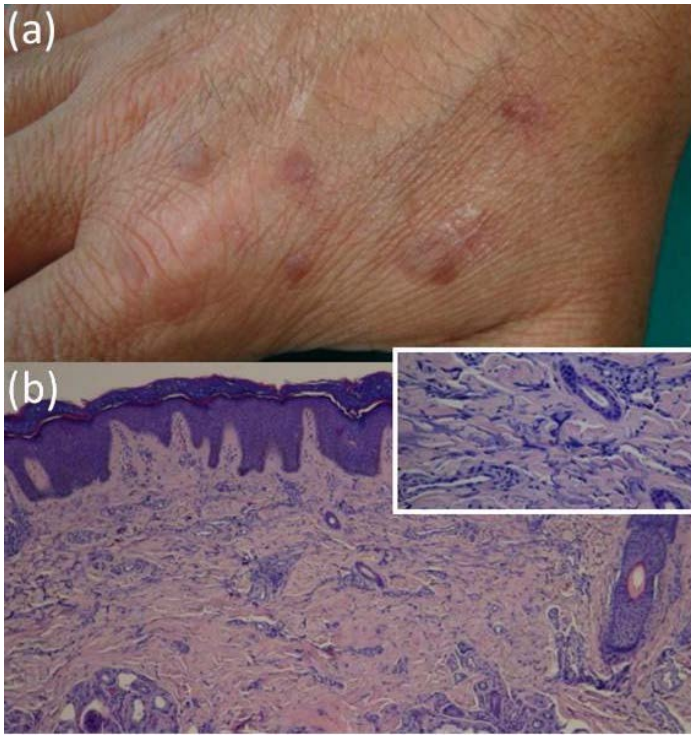

Figure 1. (A) Clinical aspect of multinucleate cell angiohistiocytoma on the dorsum of the right hand (B) Histopathological examination. Inset, detail with multinucleate cells.

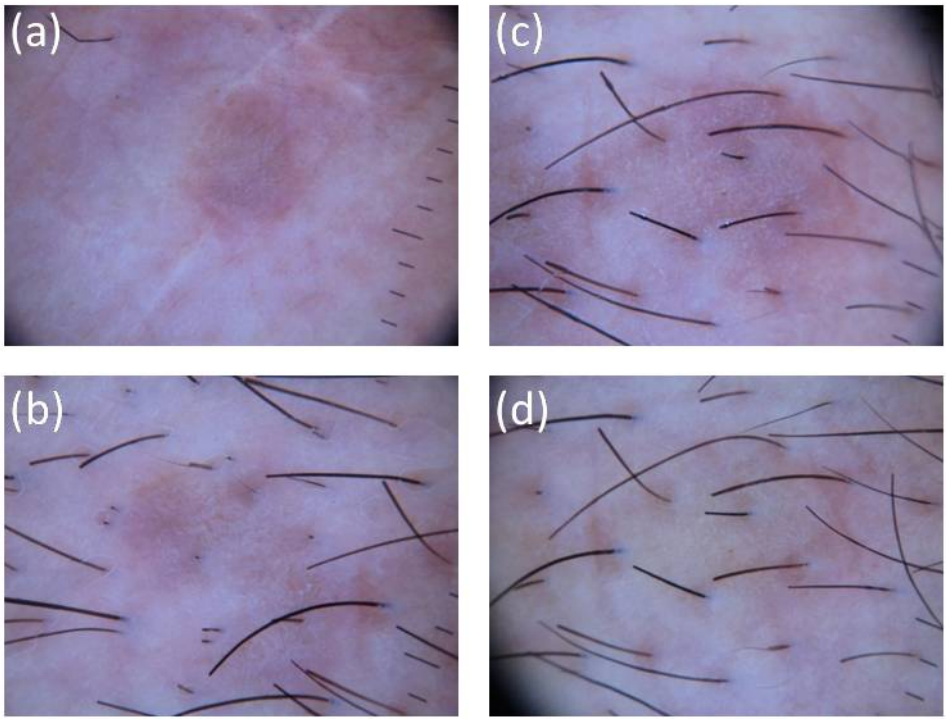

Figure 2. Dermoscopic aspects of multinucleate cell angiohistiocytoma

Discussion

MCA is usually reported as a vascular skin tumor [2]. However, MCA lesions have a dense fibrohistiocytic response, which may predominate, as illustrated in our case. This gives evidence to question whether the disorder should be considered a fibrohistiocytic tumor, a vascular proliferation, or a chronic inflammatory condition with fibrohistiocytic and vascular hyperplasia [3,4]. Based on immunohistochemical and electron-microscopic studies, Puig *et al* considered MCA to belong in the spectrum of factor XIIIa-positive dendrocyte proliferations (such as dermatofibromas, angiofibromas, and fibrous papules of the nose) with secondary vascular proliferation [3]. Although not pathognomonic, the most striking histological finding of MAC is the presence of multinucleate giant cells (3-10 hyperchromatic nuclei and a basophilic cytoplasm) [4]. These cells are also found in other cutaneous factor XIIIa dendrocyte proliferations. Other authors, based upon ultrastructural findings, suggest a fibroblastic origin for these cells [4]. Although inconclusive, the data from the present study point to the histiocytic lineage of MCA stromal cells.

Almazán *et al* were the first to report the dermoscopic aspects of MAC [5]. They found a common pattern with three structures: diffuse reddish areas (attributed to the dilated vessels), whitish patches (associated with thickening of the collagen), and isolated peripheral areas with a fine reticulated appearance (which are thought to represent the presence of melanin in the epidermal ridges). In our case, the whitish patches predominate in most of the lesions, which we think correlates well with the paucivascular histological picture we found, which may be explained by the long-standing presence of the lesions [5].

Although nonspecific and still largely unexplored, dermoscopy may help to rule out other conditions, which can be clinically confounded with MCA including lichen planus, viral warts, seborrheic keratosis, and early Kaposi's sarcoma.

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