Asymptomatic violaceous plaques on the dorsal hand

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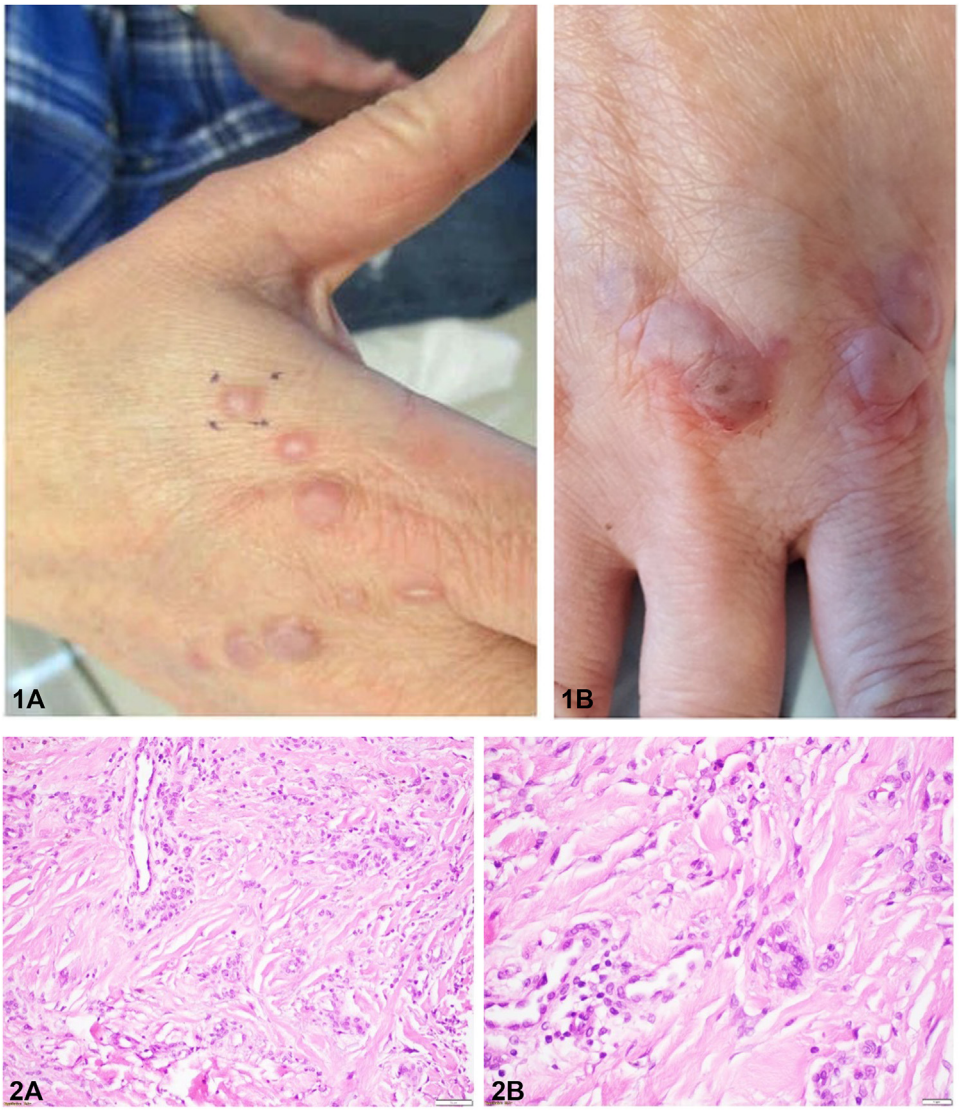

CASE DESCRIPTION

A 54-year-old female presented with a 1-year history of asymptomatic linearly grouped smooth violaceous papules on the dorsal aspect of the right hand that had progressively increased in number and were coalescing into plaques (Fig 1, *A* and *B*). Previous medical history is significant for hyperlipidemia managed with atorvastatin. A biopsy was taken, and histological examination of the sample stained with hematoxylin and eosin (H&E) showed mid-dermal fibroplasia, proliferation of small blood vessels, multinucleated cells with basophilic cytoplasm and peripheral nuclei, and focal hemosiderin deposition (Fig 2, *A* and *B*).

Question 1: What is the most likely diagnosis?

A. Lichen planus

B. Multinucleate cell angiohistiocytoma

C. Granuloma annulare

D. Sarcoidosis

E. Angiofibroma

Answers:

A. Lichen planus — Incorrect. Although lichen planus presents similarly with purplish papules or plaques, lesions are usually pruritic rather than asymptomatic, and most commonly seen on the volar wrists and flexural surfaces.

B. Multinucleate cell angiohistiocytoma — Correct. Multinucleate cell angiohistiocytoma (MCAH) is a rare vascular and fibrohistiocytic proliferation of unknown etiology.[1] Lesions may present as localized solitary or coalescing violaceous papules/plaques.[1,2] Lesions are attributed to a reactive process as a result of chronic inflammation and are associated with increased dermal vascularity and fibrosis.[2]

C. Granuloma annulare — Incorrect. Though the location is typical for granuloma annulare, it often presents as annular lesions with central clearing.

D. Sarcoidosis — Incorrect. Although Sarcoidosis can present as firm, oval, skin-colored, or violaceous subcutaneous papules or plaques on the trunk or the extremities (Darier—Roussy variant), cutaneous sarcoidosis often presents on the face including on the eyelids and in nasolabial folds. Additionally, it may be associated with pulmonary or other systemic involvement, whereas MCAH is not.

E. Angiofibroma — Incorrect. Angiofibroma is a benign vascular neoplasm that most commonly presents as a solitary papule on the face.

Question 2: Which of the following is true regarding prognosis?

A. Benign condition with spontaneous regression

B. Benign condition with persistent lesions

C. Premalignant condition with potential for progression to angiosarcoma

D. Malignant condition with local destruction

E. Invasive malignant condition

Answers:

A. Benign condition with spontaneous regression — Incorrect. MCAH is considered benign, and although lesions have been reported to spontaneously regress at times, this is uncommon.[1]

B. Benign condition with persistent lesions — Correct. MCAH lesions rarely regress spontaneously. The condition is benign, and treatment is available by patient preference for cosmetic purpose.

C. Premalignant condition with potential for progression to angiosarcoma — Incorrect. This is a benign condition with no risk for progression to any kind of cutaneous malignancy.

D. Malignant condition with local destruction — Incorrect. MCAH is a benign condition. No morbidity or mortality is associated with MCAH.

E. Invasive malignant condition — Incorrect. This is a benign, noninvasive condition.

Question 3: The patient wishes to proceed with treatment for cosmetic purposes, but she would like to start conservatively. What is the most common choice for nonsurgical therapy?

A. Cryotherapy

B. Intense pulsed light

C. Intralesional corticosteroid

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D. Topical timolol

E. Doxycycline

Answers:

A. Cryotherapy — Incorrect. Cryotherapy is not the most common treatment modality. Our patient first attempted cryotherapy through her primary care physician, without improvement.

B. Intense pulsed light — Incorrect. Although intense pulsed light has been implemented as a treatment modality for MCAH, it is uncommon.

C. Intralesional corticosteroid — Correct. Although surgical excision is the most common treatment modality[2] intralesional corticosteroids are the most commonly implemented pharmacologic therapy. Corticosteroids have anti-inflammatory, vasoconstrictive, and atrophogenic properties, making topical and intralesional steroids useful dermatologic therapies for MCAH, particularly when used in combination with lasers (eg, Potassium titanyl phosphate, CO2 laser).[1,3,4] Most cases report lack of early improvement in MCAH lesions with isolated use of topical and intralesional triamcinolone, but improvement in lesion size and number when used in series with subsequent laser therapy.[1,4,5]

D. Topical timolol — Incorrect. Although topical timolol would be an interesting novel approach (it was used by the authors with no improvement) due to its anti-angiogenic properties to reduce vascularization in the dermis of MCAH lesions, it has not been reported as a treatment option.

E. Doxycycline — Incorrect. Although it could be used for its anti-inflammatory properties, it is not routinely used for treatment of MCAH.

Abbreviation used:

MCAH: multinucleate cell angiohistiocytoma

Conflicts of interest

None disclosed.

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