Solitary Papule on the Shoulder

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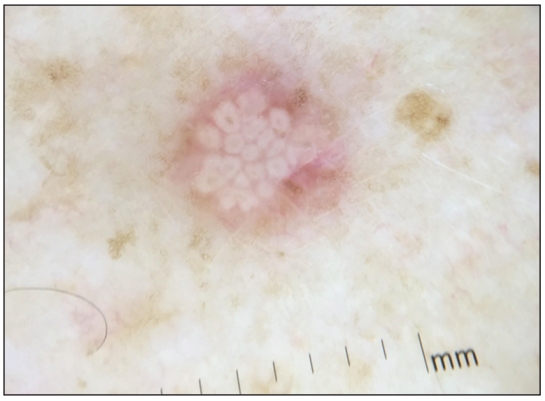

A 64-year-old man presented to dermatology for a full-body skin examination. He had no history of skin cancer. Physical examination revealed an asymptomatic, 4-mm, yellowish pink papule on the left posterior shoulder (top). Dermoscopy revealed yellow globules (bottom). The patient was unsure of the duration of the lesion and denied any prior trauma or medical procedure to the area. Subsequently, a shave biopsy was performed.

WHAT'S YOUR **DIAGNOSIS?**

a. dermatofibrosarcoma protuberans
b. dermatofibroma with sebaceous induction
c. scar
d. sebaceous adenoma
e. sebaceous hyperplasia

PLEASE TURN TO PAGE 250 FOR THE DIAGNOSIS

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THE **DIAGNOSIS:** Dermatofibroma With Sebaceous Induction

The biopsy of the lesion revealed a fibrohistiocytic dermal pattern with overlying benign epidermal and sebaceous hyperplasia with a proliferation of fibroblasts in the dermis. Other sections revealed hyperplastic sebaceous glands of the superficial and mid dermis. These findings were suggestive of a dermatofibroma (DF) that had induced epidermal and sebaceous hyperplasia.

Dermatofibromas are common benign fibrous soft tissue growths that account for approximately 3% of dermatopathology specimens.[1] The etiology of DFs is unknown; however, they are thought to arise from sites of prior trauma or arthropod bites. Multiple or eruptive DFs have been reported in patients with lupus and atopic dermatitis.[2] They commonly appear as round firm nodules measuring less than 1 cm in diameter on the extremities of young adults. Eruptive dermatofibromas also have been reported in human immunodeficiency virus–positive and immunosuppressed patients.[3,4] On physical examination, gently pinching the lesion causes a downward movement known as the "dimple sign." If left undisturbed, DFs persist but may undergo partial regression, especially in the center; they also may be excised if symptomatic.

The clinical differential for this papule included a scar and sebaceous hyperplasia. The lack of history of skin cancer or prior procedure made a scar less likely. Sebaceous glands are less prominent on the shoulders, making sebaceous hyperplasia less likely, though dermoscopy showed pale yellow lobules. Sebaceous adenomas most commonly are seen on the head or neck and present as a flesh-colored papule. Sebaceous induction by DFs is rare but has been reported in the literature.[5,6]

The histology of DFs is described as a nodular proliferation of spindle-shaped fibroblasts and myofibroblasts with short intersecting fascicles. A predilection for sebaceous induction from an underlying DF on the shoulder has been reported.[5] Sebaceous differentiation has been reported in 16% to 31.6% of DFs.[5,6] Seborrheic keratosis–like epidermal hyperplasia frequently has been seen in DFs with sebaceous induction in comparison to DFs without sebaceous induction.[5] Immunohistochemical stains are important to help differentiate DF from dermatofibrosarcoma protuberans, especially when approaching the subcutis. Dermatofibromas stain positive for factor XIIIa and negative for CD34, whereas dermatofibrosarcoma protuberans stain negative for factor XIIIa and positive for CD34.[7] Dermatofibromas also demonstrate positive immunostaining for vimentin, stromelysin 3,[8] muscle-specific actin, and CD68.

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