Yellow Nodule on the Scalp

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A 45-year-old woman was referred to dermatology by a primary care physician for evaluation of a raised skin lesion on the scalp. She was otherwise healthy. The lesion had been present for many years but recently grew in size. The patient reported that the lesion was subject to recurrent physical trauma and she wanted it removed. Physical examination revealed a 6×6-mm, dome-shaped, yellow nodule on the left inferior parietal scalp. There were no similar lesions located elsewhere on the body. A shave removal was performed and sent for histopathologic evaluation.

WHAT'S YOUR **DIAGNOSIS?**

a. giant molluscum contagiosum
b. nodular basal cell carcinoma
c. pilar cyst
d. sebaceous adenoma
e. solitary sclerotic fibroma

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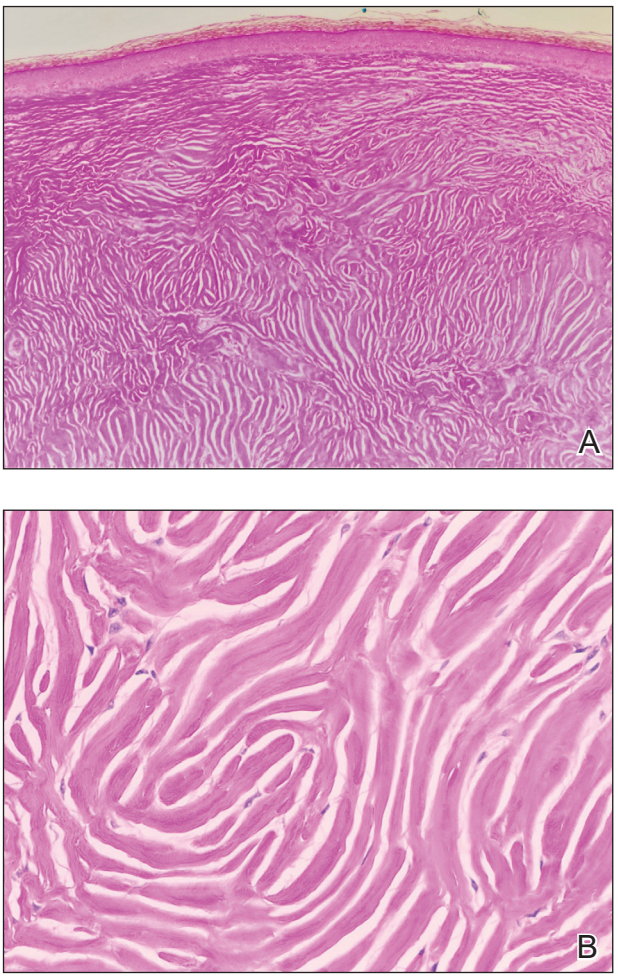
THE **DIAGNOSIS:** Solitary Sclerotic Fibroma

Based on the clinical and histologic findings, the patient was diagnosed with solitary sclerotic fibroma (SF). Sclerotic fibroma is a rare benign tumor that first was described in 1972 by Weary et al[1] in the oral mucosa of a patient with Cowden syndrome, a genodermatosis associated with multiple benign and malignant tumors. Rapini and Golitz[2] reported solitary SF in 11 otherwise-healthy individuals with no signs of multiple hamartoma syndrome. Solitary SF is a sporadic benign condition, whereas multiple lesions are suggestive of Cowden syndrome. Solitary SF most commonly appears as an asymptomatic white-yellow papule or nodule on the head or neck, though larger tumors have been reported on the trunk and extremities.[3] Histologic features of solitary SF include a well-circumscribed dermal nodule composed of eosinophilic dense collagen bundles arranged in a plywoodlike pattern (Figure). Immunohistochemistry is positive for CD34 and vimentin but negative for S-100, epithelial membrane antigen, and neuron-specific enolase.[4]

The differential diagnosis of solitary SF of the head and neck includes sebaceous adenoma, pilar cyst, nodular basal cell carcinoma, and giant molluscum contagiosum. Sebaceous adenomas usually are solitary yellow nodules less than 1 cm in diameter and located on the head and neck. They are the most common sebaceous neoplasm associated with Muir-Torre syndrome, an autosomal-dominant disorder characterized by sebaceous adenoma or carcinoma and colorectal cancer. Histopathology demonstrates well-circumscribed, round aggregations of mature lipid-filled sebocytes with a rim of basaloid germinative cells at the periphery. Pilar cysts typically are flesh-colored subcutaneous nodules on the scalp that are freely mobile over underlying tissue. Histopathology shows stratified squamous epithelium lining and trichilemmal keratinization. Nodular basal cell carcinoma has a pearly translucent appearance and arborizing telangiectases. Histopathology demonstrates nests of basaloid cells with palisading of the cells at the periphery. Giant solitary molluscum contagiosum is a dome-shaped, flesh-colored nodule with central umbilication. Histopathology reveals hyperplastic squamous epithelium with characteristic eosinophilic inclusion bodies above the basal layer.

Solitary SF can be difficult to diagnose based solely on the clinical presentation; thus biopsy with histologic evaluation is recommended. If SF is confirmed, the clinician should inquire about a family history of Cowden syndrome and then perform a total-body skin examination to check for multiple SF and other clinical hamartomas of Cowden syndrome such as trichilemmomas, acral keratosis, and oral papillomas.



A, Unencapsulated dermal nodule with attenuated epidermis and a plywoodlike appearance (H&E, original magnification ×4). B, Thick and homogenized collagen bundles with prominent clefts and a whorled pattern (H&E, original magnification ×20).

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