

Flesh-Colored Lesion on the Ear

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A 46-year-old man with a history of hypertension, hyperlipidemia, and type 2 diabetes presented to the dermatology clinic with a painless nodule on the left ear of 2 years' duration. The patient denied any bleeding, drainage, or prior trauma to the area. He noted that the lesion had grown slowly over time. Physical examination revealed a 1.5×1.5-cm, flesh-colored, subcutaneous nodule with overlying telangiectasias on the left antihelix.

WHAT'S YOUR DIAGNOSIS?

- a. dermoid cyst
- b. epidermal inclusion cyst
- c. gouty tophus
- d. pilomatricoma
- e. pseudocyst of the auricle

PLEASE TURN TO **PAGE 176** FOR THE DIAGNOSIS

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The eFigures are available in the Appendix online at www.mdedge.com/cutis.

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THE DIAGNOSIS: Gouty Tophus

The lesion was excised and sent for histopathologic examination (eFigures 1 and 2), revealing aggregates of feathery, amorphous, pale-pink material, which confirmed the diagnosis of gouty tophus. The surgical site was left to heal by secondary intention. Upon further evaluation, the patient reported recurrent monoarticular joint pain in the ankles and feet, and laboratory workup revealed elevated serum uric acid. He was advised to follow up with his primary care physician to discuss systemic treatment options for gout.

Gout is an inflammatory arthritis characterized by the deposition of monosodium urate monohydrate crystals in the joints, soft tissue, and bone due to elevated serum uric acid. Uric acid is the final product of purine metabolism, and serum levels may be elevated due to excess production or underexcretion. Multiple genetic, environmental, and metabolic factors influence these processes.¹ Collections of monosodium urate crystals may develop intra- or extra-articularly, the latter of which are known as gouty tophi. These nodules have a classic chalklike consistency and typically are seen in patients with untreated gout starting approximately 10 years after the first flare. The most common locations for subcutaneous gouty tophi are acral sites (eg, fingertips, ears) as well as the wrists, knees, and elbows (olecranon bursae). Rarely, gouty panniculitis also may develop.²

Histopathology of gouty tophi reveals nodular aggregates of acellular, amorphous, pale-pink material surrounded by palisading histiocytes and multinucleated giant cells. The presence of needlelike monosodium urate crystals, which display negative birefringence, is diagnostic. Unfortunately, these crystals are destroyed in routine formalin processing.³

There are limited data regarding treatment of gouty tophi. Urate-lowering systemic medications such as pegloticase may be beneficial, but more data are needed.⁴ We pursued surgical excision in our case for definitive diagnosis; however, it is not a common treatment for gouty tophi. Typically, urate-lowering therapy is utilized to resolve or shrink lesions over time.⁵

The differential diagnosis for gouty tophi includes epidermal inclusion cyst (EIC), the most common type of cutaneous cyst. Though EICs can manifest anywhere on the body, they are not as common on the ears as gouty tophi. Epidermal inclusion cysts clinically manifest as soft subcutaneous nodules, and a central punctum often is noted. These lesions are derived from the follicular infundibulum and histologically are characterized by a cystic cavity lined by a stratified squamous epithelium with a granular layer. The cavity contains loose laminated keratin material.⁶

Pseudocyst of the auricle is a benign cystic swelling of the pinna that can develop spontaneously but most often

manifests following trauma to the area, which is believed to separate the tissue planes in the cartilage, allowing fluid to accumulate. This lesion typically is asymptomatic, though some patients report mild tenderness.⁷ Histology shows a cystic structure within the cartilage without an epithelial lining, and a perivascular inflammatory response often is observed.⁸

Pilomatricoma, also known as pilomatrixoma, is a benign tumor derived from the hair follicle matrix that manifests as a firm, slow-growing, painless subcutaneous nodule. It most often is found on the head and neck, commonly in the periauricular area.⁹ Though rare, it has been found on the auricle and external auditory canal.¹⁰ Histologically, pilomatricomas are well-defined tumors containing internal trabeculae. They contain populations of basaloid and ghost cells and often calcify, sometimes with resultant bone formation.⁹

Dermoid cysts are benign tumors that develop along lines of embryonic closure and often are diagnosed at birth or in early childhood. They most commonly manifest on the head and neck, typically in the supraorbital area. Rarely, they have been reported on the ear.⁶ Dermoid cysts may resemble EICs clinically and histopathologically, except that the cyst wall contains mature adnexal structures such as hair follicles and sebaceous glands.

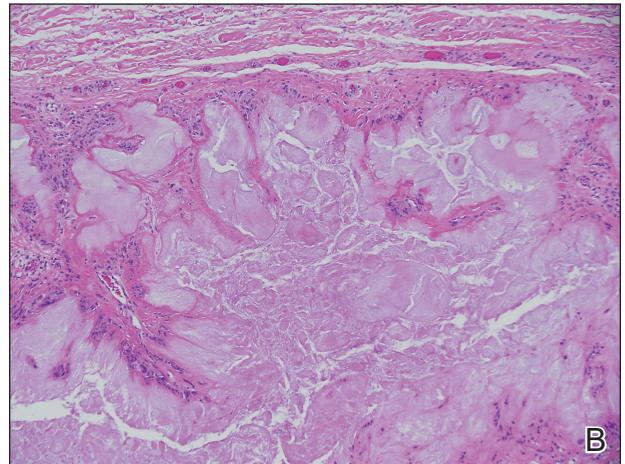
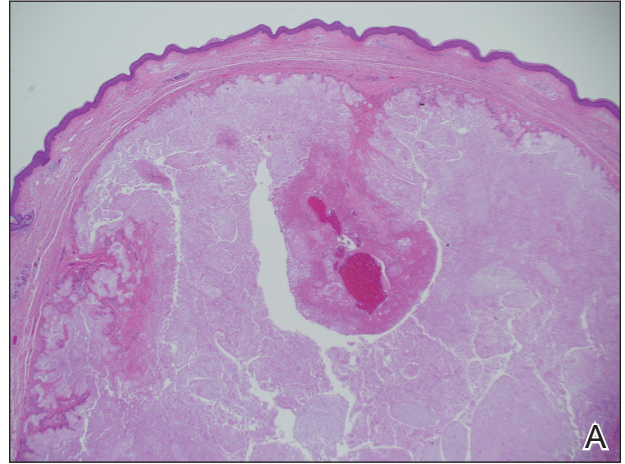
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APPENDIX



eFIGURE 1. Surgical excision revealed a well-circumscribed gouty tophus with the classic chalklike consistency.



eFIGURE 2. A and B, Well-circumscribed aggregates of acellular, pale-pink material with surrounding histiocytic inflammation (H&E, original magnification $\times 2$ and $\times 10$, respectively).