

# Diagnosis of a Rapidly Growing Preauricular Nodule: Chondroid Syringoma or Pleomorphic Adenoma?

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### PRACTICE POINTS

- Clinically and histologically, pleomorphic adenomas and chondroid syringoma both have identical presentations. Differentiation can be determined by knowing where the mixed tumor originated.
- Both lesions warrant different surgical management techniques. Pleomorphic adenoma requires extracapsular dissection or superficial parotidectomy, while complete excision is recommended for chondroid syringoma.

To the Editor:

Chondroid syringoma is a rare benign mixed tumor that originates from the sweat glands, typically presenting with both epithelial and mesenchymal components.<sup>1</sup> It differs from pleomorphic adenoma, which arises from salivary glands. The surgical approach for complete excision is different for the 2 tumors; therefore, definitive diagnosis is important. For chondroid syringoma, total excision is recommended,<sup>2</sup> while for pleomorphic adenoma, extracapsular dissection or superficial parotidectomy is commonly indicated. We report a case of a preauricular nodule at presentation and highlight the importance of differentiating a chondroid syringoma from a pleomorphic adenoma. This case is unique because of the anatomic location of the nodule, making diagnosis difficult because the tumor was abutting the parotid gland and a biopsy included normal salivary gland cells.

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A 19-year-old man with a history of moderate acne on the shoulders, back, and face presented with a rapidly growing, painless nodule on right preauricular region of 6 months' duration. The nodule was originally thought to be acne related and monitored, as the patient was asymptomatic. On examination the patient was found to have a firm, fixed, non-tender, subcutaneous nodule overlying the right temporomandibular joint just anterior to the right tragus (Figure 1). Laboratory results were unremarkable. Computed tomography showed a subcutaneous nonaggressive-appearing soft-tissue mass measuring 16×17×12 mm just anterior and inferior to the external auditory canal cartilaginous segment with no bony abnormalities. The patient was initially treated with incomplete excision of the area for a presumed sebaceous cyst; 2 months later, an abnormal biopsy prompted a complete excisional biopsy.

Histologically, the initial incomplete excision biopsy revealed myxoid and chondroid tissue with glandular elements and adjacent lymph node with strong positivity for S-100 protein and moderate positivity for glial fibrillary acid protein, consistent with chondroid syringoma (Figure 2). Histological findings on second excision biopsy performed 2 months later showed tumor cells surrounded by normal salivary gland cells; therefore, it was difficult to define the origin of this tumor. Subsequent

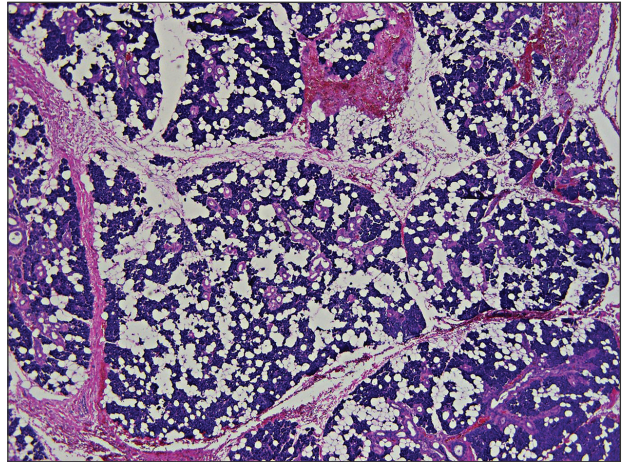


**Figure 1.** A preauricular nodule overlying the temporo-mandibular joint.

magnetic resonance imaging showed no evidence of the tumor and normal parotid gland borders.

Chondroid syringoma is a rare nonmelanoma skin tumor of the head and neck, mostly benign in nature but with malignant potential. Predominantly, it presents in males as an asymptomatic, slow-growing, nontender nodule.<sup>2</sup> Malignant chondroid syringomas are more rare, typically appear on the trunk and legs of females, and present as rapidly growing hard nodules. They can arise de novo or from a preexisting chondroid syringoma and can metastasize.<sup>3,4</sup>

Clinically and histologically, chondroid syringoma resembles a pleomorphic adenoma. Its diagnosis is dependent on the clinical location to exclude origin in a salivary gland.<sup>5</sup> Folliculosebaceous and myoepithelial differentiation within the tumor has been reported.<sup>6</sup> Immunocytochemistry is the same in both types and is used to identify 2 prominent components—epithelial and mesenchymal—found in both chondroid syringoma and pleomorphic adenoma. Immunocytochemistry differentiates the epithelial component, which expresses cytokeratin, epithelial membrane antigen, and carcinoembryonic antigen. In contrast, the mesenchymal



**Figure 2.** Histology showed myxoid and chondroid elements (H&E, original magnification  $\times 10$ ).

component expresses S-100, vimentin, and neuron-specific enolase, and less often glial fibrillary acidic protein, smooth muscle actin, calponin, or p63.<sup>5,7,8</sup> Identification of both layers is a distinctive trait of both tumors, rendering it apart from other conditions in the differential diagnosis.<sup>5</sup>

Typical treatment options include excision, electrodesiccation, dermabrasion, and argon or CO<sub>2</sub> laser. Total excision is recommended if there is a benign tumor and complete excision is a cure.<sup>2</sup> One case of recurrent benign chondroid syringoma was treated by Mohs micrographic surgery on the eyebrow<sup>9</sup>; however, Mohs surgery was not recommended in our case due to concerns of spread if malignant as well as an unknown tumor depth, as these tumors have a tendency for deep infiltration.

Due to its anatomical location and presentation as an anterior preauricular mass, it was difficult to differentiate between chondroid syringoma from sweat gland origin and pleomorphic adenoma from the salivary gland. As seen in our case, it is important for physicians to be aware of the differential diagnosis for mixed tumors because it can have a notable effect on the type of surgical therapy and follow-up management.

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