

# Cystic Sebaceous Adenoma of the Parotid Gland: A Case Report<sup>1</sup>

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Cystic sebaceous adenomas are rare neoplasms that can arise in salivary glands. Among the salivary glands, the most commonly reported location is the parotid gland where it must be differentiated from other intraparotid masses. Unfortunately, its imaging features are not well-known as a result of its rarity. We report a case of cystic sebaceous adenoma that manifested as a gradually enlarging mass within the parotid gland of a 60-year-old man.

**Index words :** Neoplasms

Computed tomography (CT)

Salivary glands, neoplasms

Sebaceous adenomas are rare benign epithelial tumors composed of cells that exhibit sebaceous differentiation; these tumors account for less than 0.1% of all salivary gland neoplasms (1, 2). The parotid gland is the most frequently involved of the salivary glands, where sebaceous differentiation is common (3). There is little information available in English literature on the radiologic features of this rare neoplasm, especially that of cystic sebaceous adenoma. This report presents the CT findings of a cystic sebaceous adenoma in the parotid gland of a 60-year-old patient.

## Case Report

A 60-year-old man presented with a mass on the right parotid area that had been gradually enlarging for three years without symptoms of pain or tenderness. The pa-

tient had no significant history of past illness. The differential diagnosis on physical examination included benign parotid mass and lymphadenopathy. Laboratory tests revealed no abnormalities.

Computed tomography (CT) revealed a well-demarcated mass measuring about 2 × 2.5 × 3 cm in the right parotid area, initially misinterpreted as arising within the right masseter muscle. On pre-contrast CT scan, the mass mainly showed low attenuation-containing fat components (-40 HU) (Fig. 1A). On contrast enhancement, only a thin capsule-like structure was enhanced at the periphery of the lesion (Figs. 1B and 1C). The imaging differential diagnosis included dermoid cyst and lipoma, and the mass was thought to originate in the right masseter muscle. No cervical lymphadenopathy was found.

Superficial parotidectomy of the right parotid gland and gross examination revealed a round mass measuring 3.7 × 3 × 3 cm within the right parotid gland. In sections of the mass, the cut surface exhibited a unilocular cystic lesion containing old hemorrhage and grayish-white friable tissue (Fig. 2). Microscopically, the cyst wall was lined with stratified squamous epithelia with evidence of sebaceous differentiation, including the

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presence of foamy cytoplasm. Focal basaloid hyperplasia was also noted with some dysplastic change (Fig. 3A). The cystic lumen contained necrotic and papillary-growing sebaceous cells (Fig. 3B). The pathological diagnosis of cystic sebaceous adenoma was rendered based on these findings.

### Discussion

Sebaceous adenomas are rare, benign, encapsulated, epithelial tumors that comprise less than 0.1% of all salivary gland neoplasms; they belong to a category that includes other sebaceous neoplasms, such as sebaceous lymphadenoma, sebaceous carcinoma, and sebaceous lymphadenocarcinoma, as well as sebaceous differentiation within other tumors (1, 2). As the name implies, these tumors originate from locations where sebaceous gland tissue exists; hence, the most common locations are the face and scalp (4, 5). However, sebaceous gland tissue has been reported in salivary glands (3), which explains the discovery, although rare, of these tumors in such locations. Among the salivary glands, the parotid gland is the most common site of origin (1, 3). Other less common sites include the submandibular gland, the minor salivary glands, Stenson’s duct of the buccal mucosa, the lower molar, and the lacrimal gland (6 - 8). Patients who present with these tumors are mostly in their fifth or sixth decade with a slight male predominance (2). Sebaceous adenomas involving the skin are a component of Muir-Torre syndrome (MTS), an autosomal dominant genodermatosis characterized by at least

a single sebaceous gland tumor and an internal malignancy such as colorectal or genitourinary carcinoma (5, 7). In contrast, no such relationship between these tumors and MTS has been documented when the tumors arise from salivary glands. In this particular case, CT evaluation of the chest and abdomen found no evidence of internal malignancy.

Grossly, the tumor size typically ranges from 0.4 to 3 cm in diameter and tumors are well-capsulated or sharply circumscribed. The tumor is usually grayish white, pinkish white or yellowish gray in color. Histologically, in past reports, many tumors have a microcystic appearance with abundant sebaceous glands, and all the neoplasms were embedded in a stromal fi-

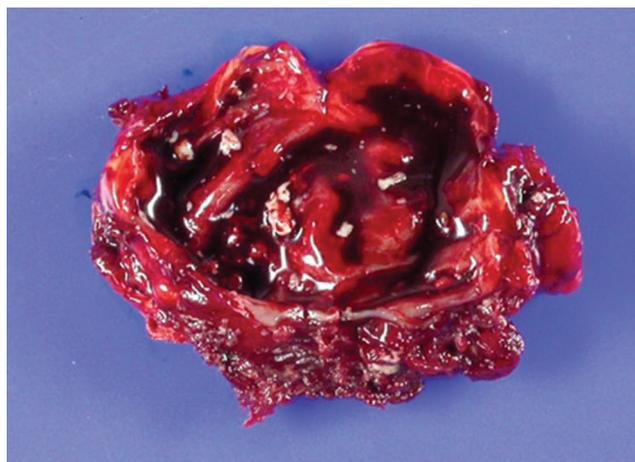
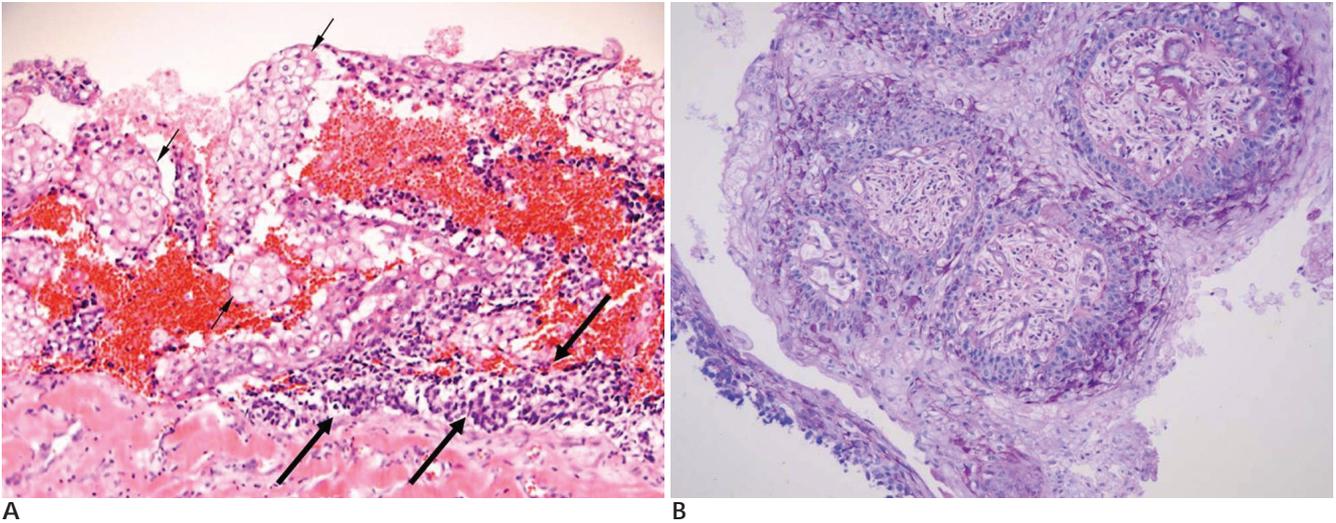


Fig. 2. Gross specimen from right superficial parotidectomy. The tumor predominantly consists of a cyst that contains old hemorrhage. The inner surface is smooth without solid portions.



Fig. 1. A 60-year-old man presented with a gradually enlarging mass in the right parotid area.  
 A. Pre-contrast axial CT scan shows a round circumscribed mass that was initially misinterpreted as located within the right masseter muscle; surgery and histopathology later proved it to be parotid in origin. The mass demonstrates low attenuation-containing fat components (- 40 HU) (\*).  
 B. Post-contrast axial and (C) coronal CT scans reveal only peripheral rim enhancement corresponding to the cyst wall.



**Fig. 3.** Photomicrographs of the histologic specimen.  
**A.** The cystic wall is lined by stratified basaloid squamous epithelium with basal cell hyperplasia (large arrows). The cystic lumen contains nests of sebaceous cells (small arrows). (H & E,  $\times 200$ )  
**B.** The lumen of the cyst contains papillary-growing sebaceous cells. (H & E,  $\times 100$ )

brosis. The tumor is composed of incompletely differentiated sebaceous lobules containing various amounts of sebaceous cells and undifferentiated basaloid cells the cystic nature of the sebaceous adenoma resulted from necrosis of central sebaceous cells (1, 5 - 8).

Although sebaceous adenoma is well-known and has been reported in various literatures, it has been of little interest to radiologists because of its rarity and the fact that most sebaceous adenomas arise in superficial sebaceous glands where imaging evaluation is rarely necessary. However, when it arises in the salivary gland, it must be differentiated from other salivary gland neoplasms and understanding its imaging features becomes necessary. On CT scan, the most commonly reported appearance of sebaceous adenoma is a solid mass with various degrees of cystic change (9, 10). Differential diagnosis of sebaceous adenomas that have a cyst-like appearance includes Warthin tumor, inflammatory cyst, or first branchial cleft cyst. Some reports document hypoattenuated areas of negative Hounsfield value within the mass, corresponding to sebaceous material, as we saw in this case. Lipoma also exhibits a negative Hounsfield value on CT due to its adipose composition, but it can be differentiated by its homogeneous fat density (2, 9, 10).

In summary, a well-circumscribed mass in the parotid gland with areas of fat attenuation on CT should suggest

the possibility of a sebaceous adenoma.

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