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Nasopharyngeal Pleomorphic Adenoma in the Adult

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Introduction: **Salivary gland tumors account for less than 5% of all neoplasms in the head and neck, with pleomorphic adenoma being the most common type. These typically arise in the palate, but we report a rare case of nasopharyngeal pleomorphic adenoma in an adult.** ***Materials and Methods:*** **The authors conducted a case report and literature review.** ***Results:*** **The patient presented with unilateral otalgia, tinnitus, and aural fullness. Nasal endoscopy revealed a pedunculated mass adjacent to the left torus tubarius and he was treated with an excisional biopsy. Histologic evaluation demonstrated pleomorphic adenoma.** ***Discussion:*** **Pleomorphic adenomas seldom present as nasopharyngeal masses and have a nonspecific appearance on endoscopy. Microscopic examination has characteristic features to aid in an accurate diagnosis. Treatment is surgical and recurrence is unlikely.** ***Key Words:*** **Nasopharyngeal pleomorphic adenoma, minor salivary glands.**

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INTRODUCTION

Salivary gland tumors are rare and make up less than 5% of all head and neck neoplasms. The major salivary glands, which include the paired parotid, submandibular, and sublingual glands, account for most of the tumors in this region. The minor salivary glands are numerous and are dispersed submucosally along the aerodigestive tract. They account for less than 5% of all salivary gland tumors, with the palate being the most common site of minor salivary gland involvement.[1] Along with the upper lip and buccal mucosa, they make up approximately three-fourth of all minor salivary gland tumors.[1]

Pleomorphic adenomas, or "mixed tumors," are the most common type of minor salivary gland tumors and rarely arise from the nasopharynx. A review of the literature only revealed three previously reported cases and the mainstay of treatment was surgical. Recurrent disease is not expected if its behavior mimics pleomorphic adenomas in other salivary gland locations.

MATERIALS AND METHODS

Case Report and Literature Review

We review the clinical and histologic findings of a patient with a pleomorphic adenoma of the nasopharynx. A broad literature search with PubMed (http://www.ncbi.nlm.nih.gov) with no limits was performed and the cases are reviewed here.

CASE REPORT

The patient is a 78-year-old black man referred to the otolaryngology service for left-sided otalgia, pulsatile tinnitus, aural fullness, and subjective hearing loss. He denied otorrhea or vertigo and his other medical history was noncontributory. His left ear examination showed a clear middle ear effusion, negative Rinne, and Weber testing showed lateralization to the left. Rigid nasal endoscopy demonstrated a pedunculated mass near the torus tubarius without extension into the fossa of Rosenmüller (Fig. 1).

This lesion was sharply excised in the operating room with endoscopic guidance and the histologic findings were consistent with a pleomorphic adenoma (Figs. 2–4). Postoperatively, the patient developed a persistent left-sided eustachian tube dysfunction that was managed with a pressure-equalizing tube. He has no evidence of recurrence at 20 months' follow up.

RESULTS

Macroscopic examination of the nasopharyngeal lesion reveals a firm, pink-white mass. Histologically, the tumor is composed of both epithelial and mesenchymal stroma surrounded by an incomplete fibrous capsule, characteristic of minor salivary glands. The mesenchymal stroma is myxoid or fibrous and contained spindle cells (Fig. 2). The epithelial elements are uniformly bland with small or absent nucleoli, and are arranged into ducts, islands, sheets, and cords with cystic formation (Fig. 3). The epithelial cells appear plasmacytoid in a background of myxoid stroma (Fig. 4).

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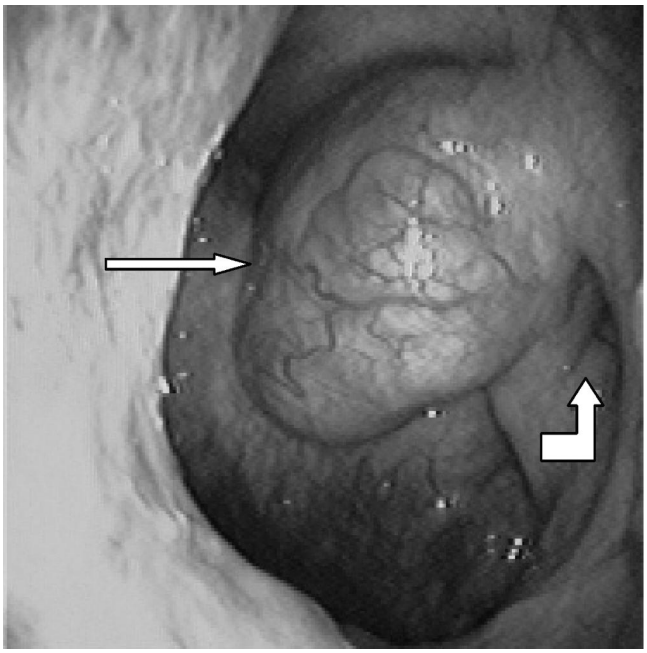

Fig. 1. A pedunculated mass is present at the left nasopharynx (arrow) immediately adjacent to the superior aspect of the torus tubarius (bent arrow).

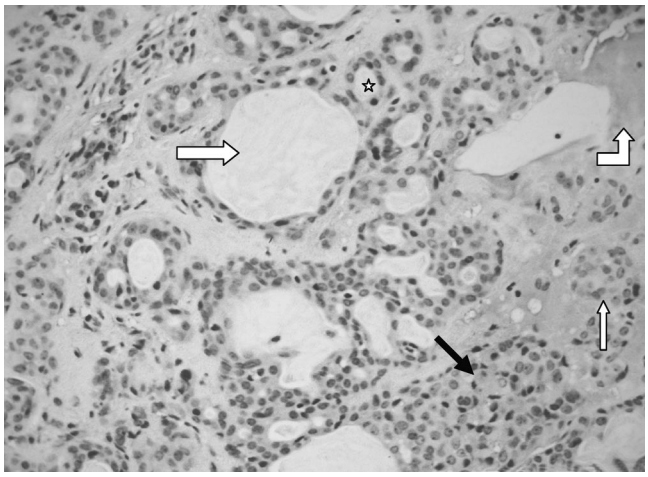

Fig. 3. Hematoxylin & eosin: 200× magnification. The tumor has a biphasic appearance showing the admixture of epithelial structures and myxoid stroma (bent arrow). The epithelial cells are bland with small or absent nucleoli and arranged in ducts (star), islands (up arrow), sheets (black arrow), and cords with cystic formation (right arrow).

DISCUSSION

Pleomorphic adenoma, or "mixed tumor," of the adult nasopharynx is exceedingly rare. A review of the literature with no search limits reveals only three previously reported cases. In a 1990 Chinese article, Li reported a series of 16 patients with minor salivary gland tumors of the nasopharynx and only one had a benign pleomorphic adenoma.[2] In 1997, Lam et al. reported a case of a 39-year-old woman with an undifferentiated carcinoma of the nasopharynx.[3] She was treated previously with radiation therapy in 1983 and then again in 1993 for recurrent disease. Three months later, a residual nodule in the treatment bed was discovered and an excisional biopsy revealed a pleomorphic adenoma. Amilibia et al. reported the third case in a 64-year-old man in a Spanish article.[4] Only Lam et al. and Amilibia et al. provided histologic documentation supporting their diagnosis.[3,4]

The characteristic histologic findings of minor salivary tumors include an incomplete fibrous capsule, epithelial cells with a bland appearance with small or absent nucleoli, and arrangement of these cells into ducts, islands, sheets, and cords with cystic formation. The case reported by Lam et al. uniquely demonstrated skeletal muscle differentiation, but it was in the setting of a patient with significant previous radiation therapy in the area.

In the pediatric population, a rare salivary gland anlage tumor, also called a congenital pleomorphic ade-

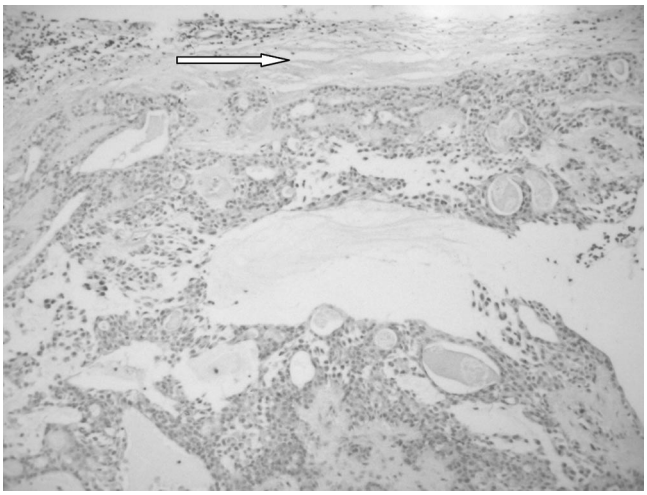

Fig. 2. Hematoxylin & eosin: 40× magnification. The tumor is surrounded by an incomplete fibrous capsule (arrow), characteristic of minor salivary glands.

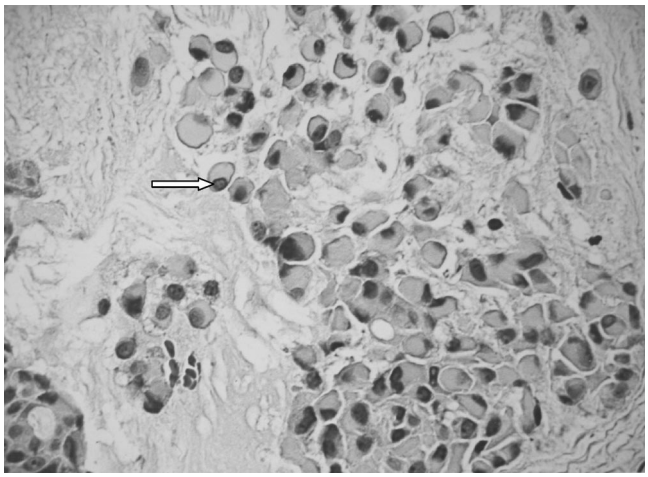

Fig. 4. Hematoxylin & eosin: 400× magnification. The epithelial cells are plasmacytoid (arrow) in appearance and seem to float in the myxoid stroma.

noma, was first reported by Har-El et al. in 1985.[5] There have been just over 12 additional cases of this entity in the next 2 decades.[6–9] Nasal obstruction was a common presenting symptom and histologic features were similar to that of the adult-onset nasopharyngeal pleomorphic adenomas.[6] An association between the congenital and adult pleomorphic adenomas has not been established.

Treatment for nasopharyngeal pleomorphic adenoma has typically involved surgical excision.[2] Given its rarity, the genetic, environmental, and perhaps infectious risk factors of this tumor have not been evaluated. Furthermore, a standard treatment algorithm remains to be formulated and malignant transformation has not been documented. In the current case, the patient underwent an endoscopic excision and there is no evidence of recurrence at 20 months' follow up.

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