Pleomorphic Adenoma of the Accessory Salivary Glands of the Nasopharynx: A Rare Location – Case Report and Literature Review

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ABSTRACT

Pleomorphic adenoma (PA) is the most common benign tumor of the salivary glands, predominantly arising from the major salivary glands. Its occurrence in the nasopharynx, originating from the minor salivary glands, is extremely rare and may lead to diagnostic delay due to non-specific clinical presentation.

We report the case of a 57-year-old man who presented with progressive unilateral conductive hearing loss associated with persistent aural fullness. Nasopharyngoscopic examination revealed a smooth, well-circumscribed mass arising from the left lateral wall of the nasopharynx and partially obstructing the Eustachian tube orifice. Magnetic resonance imaging (MRI) demonstrated a well-defined lesion with moderate T2 hyperintensity and moderate contrast enhancement, without invasion of adjacent structures. Histopathological examination of an endoscopic biopsy confirmed the diagnosis of pleomorphic adenoma of the minor salivary glands.

The patient underwent complete surgical excision via a transoral approach with clear margins. Postoperative recovery was uneventful, and no recurrence was observed during a five-year clinical and endoscopic follow-up.

This case highlights the importance of considering benign nasopharyngeal tumors in adults presenting with persistent unilateral otologic symptoms. It also emphasizes the key role of nasopharyngoscopy, MRI, and histopathological analysis in establishing the diagnosis, as well as the necessity of complete surgical excision and long-term follow-up for this rare localization.

Keywords: Pleomorphic adenoma; Minor salivary glands; Nasopharynx; Histopathology; Surgical excision.

INTRODUCTION

Tumors arising from the minor salivary glands account for approximately 10–15% of all salivary gland neoplasms and show a heterogeneous anatomical distribution [1–3]. They most commonly involve the hard palate, buccal mucosa, nasal cavity, and maxillary sinuses [1–3]. The nasopharynx represents an exceptionally rare site, probably due to the low density of minor salivary glands in this region [1,3].

Nasopharyngeal tumors are predominantly malignant, including undifferentiated carcinoma of the nasopharynx, lymphomas, and rhabdomyosarcomas [4,5]. Benign lesions, such as pleomorphic adenoma, are therefore uncommon and may clinically mimic malignant tumors during endoscopic examination [6–8].

Pleomorphic adenoma is a benign mixed tumor composed of epithelial and mesenchymal components [6–9]. Although it frequently affects the parotid and submandibular glands, its occurrence in the nasopharynx remains exceptional. This case emphasizes the importance of early diagnosis, particularly in patients presenting with persistent otologic symptoms, and highlights the diagnostic and therapeutic challenges related to this rare location.

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Case Report

A 57-year-old man with no significant medical or surgical history presented with progressive left-sided hearing loss associated with persistent aural fullness evolving over several months. There was no history of vertigo, otorrhea, dysphagia, epistaxis, or upper airway obstruction.

ENT Examination:

- Otologic examination: Otoscopy revealed a retracted left tympanic membrane with a retrotympanic effusion, consistent with otitis media with effusion (Figure 1). The right ear was normal.
- Nasal cavity: Anterior rhinoscopy was unremarkable, with no obstruction, polyps, or abnormal secretions.
- Nasopharynx: Flexible nasopharyngoscopy demonstrated a smooth-surfaced mass arising from the left lateral wall of the nasopharynx, partially obstructing the Eustachian tube orifice. The lesion was firm and non-hemorrhagic (Figures 2).
- Oral cavity and oropharynx: Normal, with no visible mass or mucosal infiltration.
- Neck examination: No palpable cervical lymphadenopathy.
- Cranial nerve examination: Normal, with preserved craniofacial nerve function.

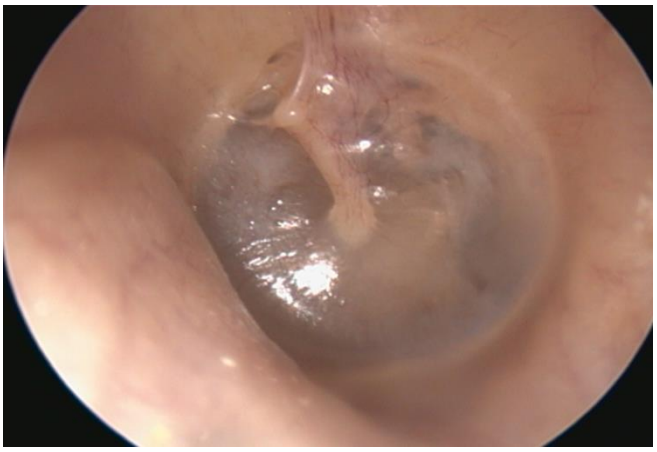

Figure 1: Left tympanic membrane showing thinning and retraction.

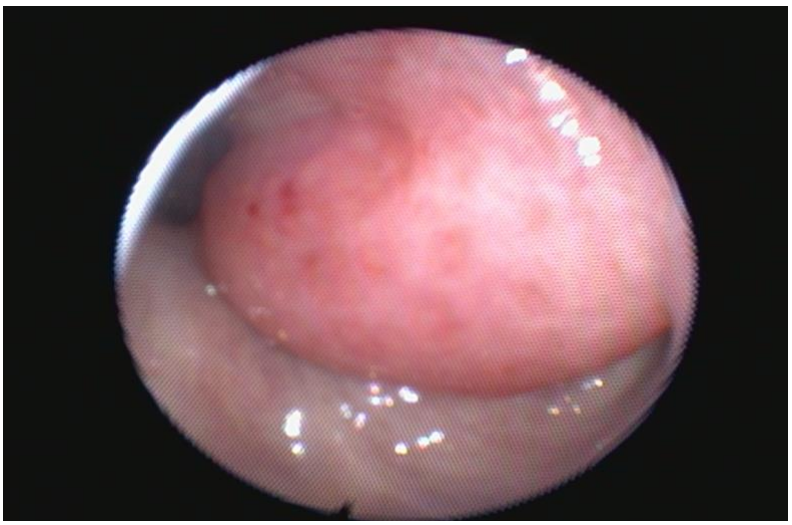

Figure 2: Nasopharyngeal mass extending toward the Eustachian tube orifice.

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Investigations:

- Pure-tone audiometry: Moderate conductive hearing loss on the left side, consistent with Eustachian tube dysfunction.
- Magnetic resonance imaging (MRI): A well-circumscribed, homogeneous mass measuring 1.5 × 1.4 × 3.5 cm was identified in the left lateral wall of the nasopharynx. The lesion showed moderate hyperintensity on T2-weighted images, corresponding to its myxoid component, and moderate enhancement after gadolinium injection. No invasion of adjacent structures or bone destruction was observed.
- Endoscopic biopsy: Histopathological examination confirmed pleomorphic adenoma of the minor salivary glands, characterized by epithelial proliferation within a myxoid stroma, without cytological atypia.

Management and Outcome:

- The patient underwent complete surgical excision via a transoral approach, ensuring clear margins. The procedure was uneventful, and postoperative recovery was uncomplicated, with no hemorrhage or infection.
- Clinical and endoscopic follow-up over a five-year period showed no evidence of local recurrence. Partial improvement in left-sided hearing was noted, with resolution of aural fullness.

Ethical Considerations:

This case report was conducted in accordance with institutional ethical standards. Written informed consent was obtained from the patient for publication of clinical data and images. No identifying information is disclosed

DISCUSSION

Pleomorphic adenoma of the nasopharynx is extremely rare, with only a few isolated cases reported in the literature [4,5,9]. This rarity is explained by the low density of minor salivary glands in the nasopharynx and the preferential involvement of parotid and palatal sites [1–3,6].

Reported cases indicate that symptoms are often insidious and mainly related to Eustachian tube obstruction [5,9], including:

- Conductive hearing loss
- Otitis media with effusion
- Tinnitus
- Aural fullness

Rhinologic symptoms such as nasal obstruction or epistaxis are uncommon, unlike malignant nasopharyngeal tumors [5,9].

MRI is the imaging modality of choice, allowing precise localization, assessment of tumor extent, and differentiation between benign and malignant lesions [10,11]. Typical MRI features include well-defined margins, variable T2 hyperintensity, moderate contrast enhancement, and absence of bone invasion. CT scanning may be useful when bone involvement is suspected [12].

The diagnosis is based on the presence of epithelial and myoepithelial components embedded in a myxoid or chondroid stroma [7,8,13]. Immunohistochemical analysis was not performed, as routine histopathological

examination was sufficient to establish the diagnosis of pleomorphic adenoma; however, immunohistochemistry may support the diagnosis, typically showing positivity for CK7, S-100 protein, and variable smooth muscle actin expression, with a low Ki-67 proliferation index [7,8,13].

Complete surgical excision with clear margins is the treatment of choice [12–14]. Surgical approaches include endoscopic nasal, transoral, or combined techniques depending on tumor size and extension.

Preoperatively, differential diagnoses included nasopharyngeal carcinoma, lymphoma, minor salivary gland malignancies, and benign mesenchymal tumors. The absence of invasive features on MRI and the well-circumscribed nature of the lesion favored a benign salivary gland origin.

Although recurrence is uncommon, malignant transformation into carcinoma ex pleomorphic adenoma has been reported in 1–12% of cases, particularly in long-standing or incompletely excised tumors [14–16]. Long-term clinical and endoscopic follow-up is therefore recommended [17,18].

CONCLUSION

Pleomorphic adenoma of the nasopharynx is an exceptionally rare entity, often presenting with non-specific otologic symptoms related to Eustachian tube dysfunction. This case underlines the importance of considering a benign tumoral etiology in adults with persistent unilateral otitis media with effusion.

Nasopharyngoscopy combined with MRI plays a central role in diagnosis and assessment of tumor extension, while histopathological examination remains essential for definitive diagnosis. Complete surgical excision with clear margins ensures an excellent prognosis. Despite the low risk of recurrence or malignant transformation, prolonged follow-up is advised. This report contributes to the limited literature on this rare localization and emphasizes the need for diagnostic vigilance.

Conflict of Interest

The authors declare no conflict of interest.

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