

CASE REPORT

An Unexpected Site: Pleomorphic Adenoma in the Nasal Septum

Ng Wei Qi^{1,2,3}, Safinaz Binti Zainor², Norasnieda Binti Md Shukri^{3*}

¹ Department of Otorhinolaryngology-Head and Neck Surgery, Hospital Sultanah Bahiyah, Kedah, Malaysia

² Department of Otorhinolaryngology-Head and Neck Surgery, Hospital Kulim, Kedah, Malaysia

³ Department of Otorhinolaryngology-Head and Neck Surgery, School of Medical Sciences, Universiti Sains Malaysia, Kelantan, Malaysia

*Corresponding author's email:
asnieda@usm.my

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ABSTRACT

Pleomorphic adenoma is the most frequent benign neoplasm of the major salivary glands, but it may also originate from minor salivary glands, particularly within the hard and soft palate. Its occurrence inside the nasal cavity is rare; when present, about 80% arise from the nasal septum, with the rest involving the lateral nasal wall or turbinates. We describe a 49-year-old woman with a year-long history of left-sided epistaxis, gradually worsening nasal blockage, and a painless swelling over the left lateral alar region for six months. Rigid zero-degree nasoendoscopy revealed a large, smooth-surfaced polypoid lesion in the left anterior nasal cavity. Histopathological evaluation of a biopsy was consistent with pleomorphic adenoma. Computed tomography of the paranasal sinuses demonstrated a well-enhancing lesion confined to the left nasal cavity. The mass was successfully removed endoscopically, and the patient has remained disease-free on follow-up. This case underscores the importance of recognising intranasal pleomorphic adenoma as a rare differential diagnosis and highlights the value of early identification with prompt surgical removal.

INTRODUCTION

Pleomorphic adenoma is the most frequently encountered benign tumour of both major and minor salivary glands, with the parotid gland being the most common site of origin.

While major glands are most often involved, the tumour can also develop in minor salivary glands, including those located in the palate, lips, and, in rare instances, the upper respiratory tract, particularly the nasal cavity (Ejeil, 2018; Kajiyama, 2019). Intranasal pleomorphic adenomas account for only about 0.4% of all pleomorphic adenomas reported worldwide (Kajiyama, 2019). Among these intranasal tumours, approximately 80-90% originate from the nasal septum, with fewer arising from the lateral nasal wall or nasopharynx (Karlighiotis, 2020; Sciandra, 2008). Interestingly, despite the lateral wall containing a greater number of seromucinous glands, septal tumours are more frequently found, a pattern that remains poorly explained.

CASE PRESENTATION

A 49-year-old woman, otherwise healthy, was referred to our clinic with a one-year history of left-sided epistaxis, nasal discharge, and nasal obstruction. She also reported a painless swelling over the left lateral nasal area that had gradually developed over six months. Clinical examination revealed bilateral obliteration of the nasofacial sulcus, more pronounced on the left side. The swelling was non-tender and exhibited a soft to firm consistency on palpation (Figure 1). Rigid zero-degree nasoendoscopy demonstrated a smooth, pinkish, vascularised, non-pulsatile mass in the left anterior nasal cavity. The precise site of origin could not be determined because of the obstructive nature of the mass, and no bleeding was noted upon gentle probing. A punch biopsy was taken, and histopathological analysis suggested pleomorphic adenoma.



Figure 1: Physical examination: obliteration over the left nasofacial sulcus (Arrow)

Computed tomography (CT) of the paranasal sinuses demonstrated an enhancing soft-tissue mass at the proximal left nasal cavity, measuring $2.4 \times 1.8 \times 2.7$ cm, with associated thinning of the adjacent left nasal bone (Figure 2).

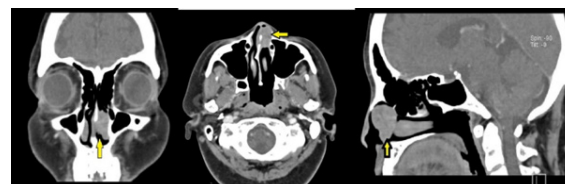


Figure 2: Computed tomography of the paranasal sinus showed an enhancing soft tissue density lesion at the proximal left nasal cavity, measuring $2.4 \times 1.8 \times 2.7$ cm with thinning of the adjacent left nasal bone (Arrows)

The lesion was excised via a transnasal endoscopic approach. Intraoperatively, the lesion was identified as originating from the left superior nasal septum near the roof and extending posteriorly to the posterior septum, measuring approximately 1.5×2.5 cm (Figure 3), without involvement of the lateral nasal wall or nasal floor. An anterior incision was made over the septum, and the mucoperichondrium was elevated to facilitate complete excision of the lesion. Histopathology confirmed pleomorphic adenoma, comprising predominantly epithelial and myoepithelial cells, with clear resection margins posteriorly.



Figure 3: Left septal mass post excision.

The patient was discharged in good condition and reviewed two weeks later for nasal splint removal. Follow-up nasoendoscopic examination revealed minimal crusting and a well-healed left nasal septal mucosa (Figure 4). Ongoing reviews

were initially conducted monthly and later extended to every three months. There has been no evidence of recurrence or residual disease at three years post-operatively.

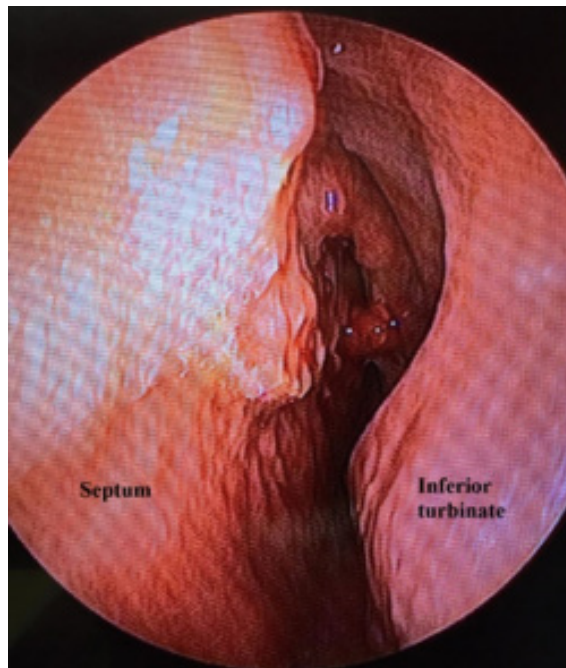


Figure 4: Nasoendoscopic view of left nostril after two weeks post-excision, showing well-healed nasal septal mucosa and no new lesion seen.

DISCUSSION

Pleomorphic adenoma, sometimes termed benign mixed tumour, is the most frequently diagnosed salivary gland neoplasm, arising from both epithelial and myoepithelial components (Mc Loughlin,2019). While the parotid gland is the predominant site, the tumour may also arise in the submandibular or minor salivary glands. Occurrence in the nasal cavity, maxillary sinus, or nasopharynx is distinctly uncommon(Ejeil,2018; Kajiya,2019; Sciandra,2008). Among intranasal cases, approximately 80% involve the septum, with the remainder occurring in the lateral wall or turbinates. Pleomorphic adenomas most commonly occur in females between the ages of 30 and 60, which is consistent with the demographic profile of our patient.

The origin of pleomorphic adenomas within the nasal septal mucosa remains

debatable. Matthew et al. proposed that these tumours may arise from displaced embryonic epithelial cells embedded in the septal mucosa during development. Alternatively, Stevenson suggested that remnants of the vomeronasal organ could be the source. In contrast, Evans and Cruickshank argued that such tumours originate exclusively from the epithelial components of mature salivary glands, rather than from embryological remnants (Compagno,1977).

Common presenting symptoms of intranasal pleomorphic adenoma include unilateral nasal obstruction, epistaxis, and occasionally pain. Patients may develop external nasal deformities or septal deviation in more advanced cases. On rigid nasoendoscopy, the lesion typically appears as a unilateral, smooth-surfaced, pale greyish to whitish mass. In our case, the patient presented with left-sided nasal obstruction, rhinorrhoea, and external nasal swelling. Endoscopic examination revealed a smooth, pinkish, vascularised mass occupying the left anterior nasal cavity. The mass was obstructive, which limited visualisation of its point of origin. However, gentle probing during endoscopy did not elicit any bleeding. Definitive diagnosis is established through tissue biopsy, often complemented by imaging studies such as computed tomography (CT) or magnetic resonance imaging (MRI). These modalities are critical in preoperative planning, as they assist in delineating the tumour's extent and excluding aggressive features or local invasion (Sciandra,2008). On CT, these tumours often appear as well-defined, lobulated lesions displacing the septum, and can also highlight areas of calcification or adjacent bony changes (Ozturk,2008). However, in this case, the exact origin was indeterminate on imaging and was only confirmed intraoperatively.

The preferred treatment modality is complete surgical excision with tumour-free margins. While open approaches such as lateral rhinotomy, transpalatal access, and midfacial degloving have been described, the transnasal endoscopic approach is increasingly

preferred due to its minimally invasive nature, reduced morbidity, and favourable cosmetic outcomes (Case,2022). Complete resection is crucial, as pleomorphic adenomas risk recurrence and malignant transformation. Malignant change—referred to as carcinoma ex pleomorphic adenoma—has been reported in approximately 4% of cases, with a 2.4% malignancy rate specifically among nasal tumours. Postoperative recurrence has also been reported in up to 8.8% of cases (Kajiyama, 2019).

Extended surveillance is necessary to enable early recognition of recurrence or malignant transformation (Sciandra,2008). This typically involves periodic endoscopic examinations and, where indicated, repeat imaging with CT or MRI. Our patient's follow-up nasoendoscopy up to three years postoperatively showed no signs of recurrence or complications, and imaging was deferred without clinical concern.

CONCLUSION

Although intranasal pleomorphic adenoma is rare, it should remain a consideration in patients with unilateral nasal obstruction and epistaxis, particularly when a nasal mass is identified on examination. Timely recognition and appropriate surgical management are essential to prevent complications and ensure favourable outcomes. Owing to the risk of recurrence or malignant transformation, prolonged follow-up is advisable. This case emphasises the importance of maintaining a broad diagnostic perspective when evaluating unilateral nasal lesions..

CONFLICT OF INTEREST

None of the authors has any conflicts of interest to disclose in this case report..

CONSENTS

Written informed consent was obtained from the patient. A copy of the consent form is available for review by the Editor-in-Chief.

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