

Case report article

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Pleomorphic adenoma of the nasal septum: a case report

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Abstract

Pleomorphic adenoma is the most common benign tumor of major and minor salivary glands. It rarely originates from the nasal cavity. Recognizing the symptoms and characteristics of the condition is crucial for early diagnosis and appropriate treatment, given its potential for malignant transformation. We are reporting a case of a 28-year-old female with a long duration of unilateral nasal obstruction. Rigid nasal endoscopy showed a mass at the right nasal septum. Preoperative imaging was performed followed by endoscopic resection of the mass. The pathological diagnosis was pleomorphic adenoma. Post-operatively, appropriate examination with nasal endoscopy Long-term follow-up is essential to monitor for local recurrence

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1. INTRODUCTION

Salivary gland tumors constitute 3% of head and neck tumors, and the most common benign tumor is pleomorphic adenoma. In 70% cases, pleomorphic adenoma arises from the major salivary gland, and around 10% originate from the minor salivary gland [1-4]. It is a mixed tumor type that is composed of two types of cells: epithelial and myoepithelial structures [4,5]. The epithelial component can undergo malignant transformation in isolation or with stroma, which can be an aggressive malignant tumor with a five-year mortality rate of 30-50% [4,6].

Pleomorphic adenoma of the minor salivary glands can be found at locations where the minor salivary glands exist, such as the neck, ear, mediastinum, external

nose, cheek, and nasal cavity [3,5,7,8]. A lesion detected in the nasal cavity is rare, and for most of the cases, the tumor originates from the mucosa of the nasal septum even though the seromucosal glands are mainly at the lateral nasal wall [1,7].

We report the case of a patient who presented with right nasal block and rhinorrhea for two years. Imaging and biopsy help in confirming the disease and hence proper treatment can be started.

2. CASE PRESENTATION

A 28-year-old female patient with symptoms of snoring presented to the Otorhinolaryngology Outpatient Department with right-sided nasal obstruction. On clinical examination, the patient was noted to have a loss of the right nasolabial fold. Additionally, there were

no other nasal symptoms such as epistaxis, foul-smelling nasal discharge, facial pain, or swelling. No cervical lymphadenopathy was noted. She also denied any constitutional symptoms, ear symptoms, throat symptoms, or history of trauma to the nose. There was no significant past medical or surgical history.

Rigid nasal endoscopy revealed a globular mass with a smooth surface and prominent blood vessels, originating from the right side of the nasal septum (Figure 1). The mass was firm in consistency and did not bleed upon touch. Other examinations showed no significant findings.

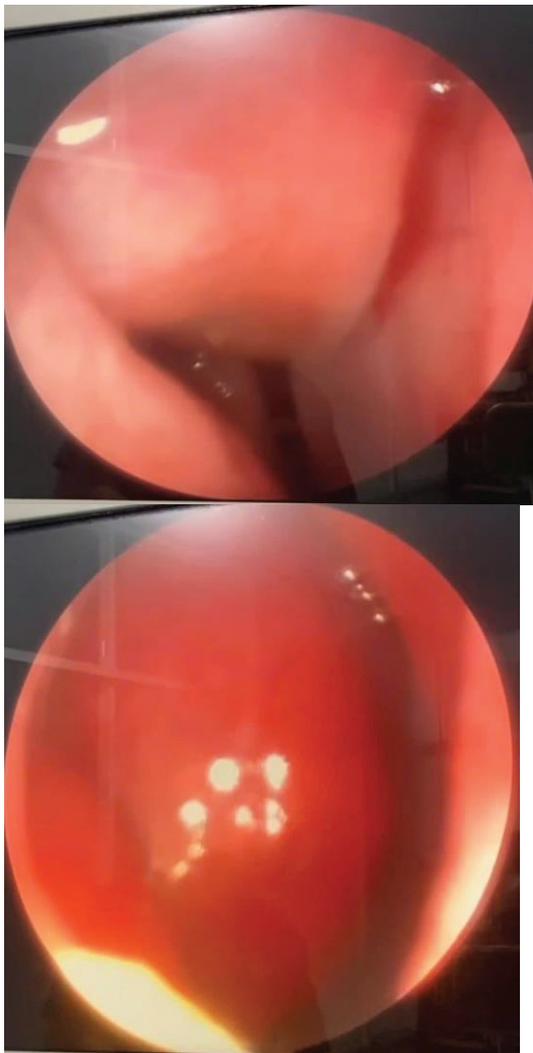


Figure 1: Rigid nasal endoscopy revealed a globular mass

Computed tomography (CT) of the paranasal sinus showed a well-defined

heterogeneously enhancing soft tissue lesion at the anterior aspect of the right nasal cavity, measuring 15 x 18 x 27 mm, and limited in the nasal cavity. The mass causes a contour bulge toward the nasal septum, causing slight right deviation of the nasal septum. It had no extension into the subcutaneous tissue, toward the right nasal cavity, or next to the anterior aspect of the right inferior turbinate with no clear plane demarcation in between (Figure 2). There is also associated remodelling with cortical thinning of right-sided nasal bone. Bilateral parotid and submandibular glands are normal.

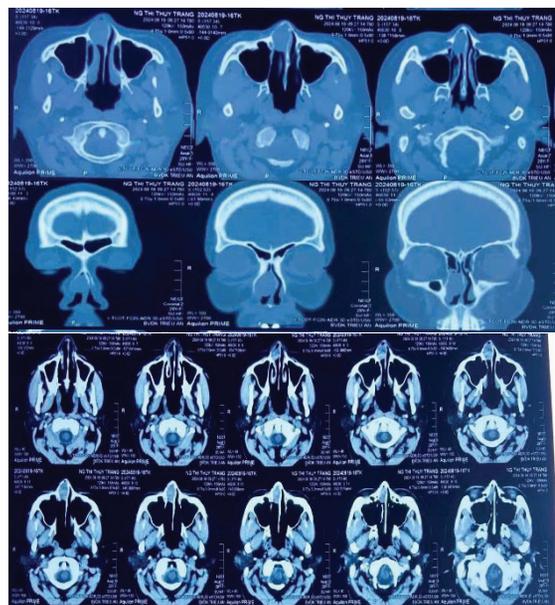


Figure 2. Computed tomography (CT) of the paranasal sinus

Magnetic resonance imaging (MRI) of the paranasal sinus showed a space-occupying lesion in the upper and middle right nasal cavity, measuring 26 x 21 x 18 mm. The lesion had smooth lobulated margins, with low signal intensity on T1-weighted images and high signal intensity on T2-weighted images. After contrast administration, the lesion demonstrated strong heterogeneous enhancement. The mass compressed and bulged adjacent structures, including the nasal septum, alar cartilage, and nasal bone, but no signs of bone destruction were observed.

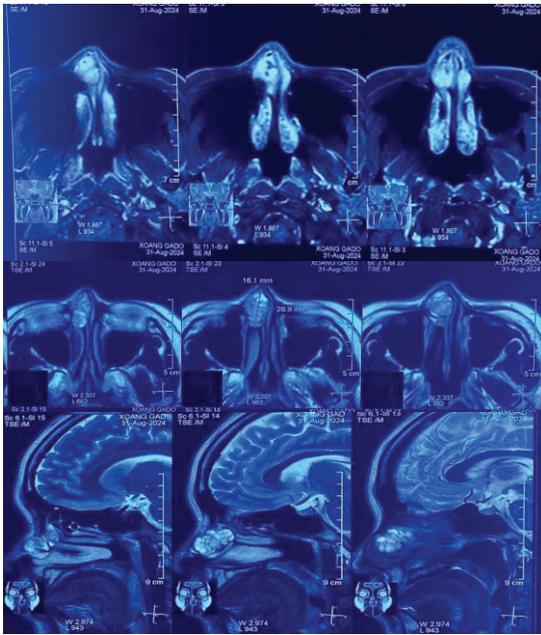


Figure 3. Magnetic resonance imaging (MRI) of the paranasal sinus

Endoscopic excision of the right septal mass was performed. A vertical incision was made in the right nasal septal mucosa anterior to the mass, and the mucoperichondrium was elevated. The right side of the nasal septum was not involved, and there was no evidence of cartilage invasion. The mass was found to arise from the anterior part of the right septal mucosa and was excised. A nasal pack (Merocel®) was placed in the right nasal cavity.



Figure 4. Endoscopic excision of the right septal mass

Pathology examination revealed firm, white tissue fragments measuring 25 x 20 x 10 mm. The tumor specimen showed hyperplasia of epithelial cells and salivary gland cells with ductal structures, interspersed with cells containing osseous and adipose-like material. Histopathology results confirmed this to be a pleomorphic adenoma.

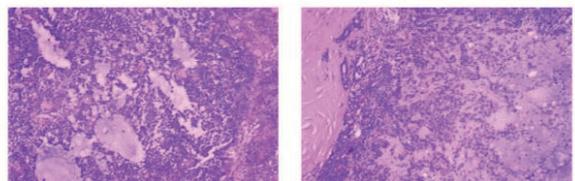


Figure 5. Pathology examination

The postoperative period was uneventful, and the right nasal pack (Merocel®) was removed the following day, after which the patient was discharged. She was reviewed a week later for a check-up and subsequently after one month. Nearly two months post-surgery, no signs of recurrence were noted during rigid nasal endoscopic examinations (Figure 6).

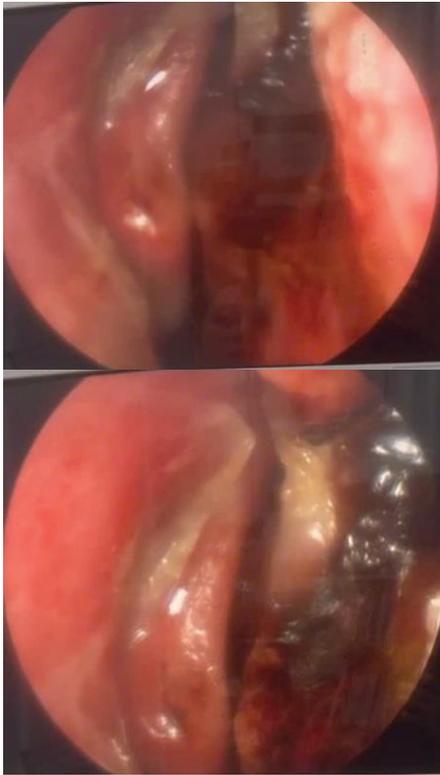


Figure 6. The postoperative period

3. DISCUSSION

Pleomorphic adenoma is the most common benign salivary gland tumor and constitutes around 65% of all salivary gland neoplasms. It can arise from parotid glands, submandibular glands, or other minor salivary glands. It also can occur in the respiratory tract via the minor salivary glands, which is very rare [1,4]. In the upper respiratory tract, usually it is found in the nasal cavities followed by the maxillary sinus and nasopharynx. Approximately 80% pleomorphic adenomas of the nasal cavity originate from the nasal septum, while others originate from the lateral nasal wall or turbinate [4,7].

Intranasal mass has many differential diagnoses such as benign lesions (inverted papilloma, squamous papilloma, pleomorphic adenoma, schwannoma, chondroma, encephalocele) or malignant lesions (squamous cell carcinoma, malignant melanoma, lymphoma, cartilaginous tumors) [1,3,7]. Hence, investigation is needed to diagnose the

disease so that treatment can be offered accordingly. Intranasal pleomorphic adenoma typically occurs between the ages of 30 and 60 years and is more prevalent in females [1,8]. The rate for malignancy transformation is 2.5-10%.

Patients can have painless, unilateral nasal blockage, epistaxis, sinusitis, or mass within the nasal cavity. Other nasal symptoms such as nasal swelling, anosmia, epiphora, and mucopurulent rhinorrhea may also be present [1,8]. Rhinoscopy or rigid nasal endoscopy will show a unilateral, smooth surface, pale grayish whitish mass [1,8]. In our case, the patient presented with right nasal blockage and rhinorrhea, and rigid nasendoscopy revealed a unilateral, globular, smooth-surfaced mass arising from the right side of the nasal septum. Imaging studies such as CT scan and magnetic resonance imaging (MRI) are useful in determining the origin of intranasal mass when it is smaller in size and accompanied by neighboring bony changes. CT scan may show a distinct, lobulated mass displacing the nasal septum [5]. As for our patient, her CT scan fit the criteria as it showed a well-defined mass, which also caused a slight right-deviated nasal septum.

Pleomorphic adenoma is a slow-growing tumor, but it has a high rate of recurrence of approximately 50% for parotid gland tumors and low recurrence rate of 10% for intranasal tumors [6]. Histopathology examination shows manifestation of both epithelial and mesenchymal components. It is usually encapsulated in the major salivary gland and nonencapsulated in the minor salivary gland [2]. The literature showed that pleomorphic adenoma also has a risk of malignant transformation; hence, excision is justified in nearly all cases. Nasal septal pleomorphic adenoma is treated by total excision with clear, wide surgical margin, and the depth is based on radiological and intraoperative findings. This is important

to avoid disease recurrence [1,2,8]. Options for removal of tumor vary depending on the size and location of the tumor, such as endoscopic resection, intra-nasal excision lateral rhinotomy, and midfacial degloving [1,2,8]. Nasal endoscopic resection was performed in our patient as the mass was limited to the anterior aspect of the nasal cavity.

After treatment, long-term follow-up is needed to monitor any evidence of local recurrence [1,2,8]. Some studies reported that imaging (CT scan or MRI) was repeated during follow-up [5]. However, in our patient, as her symptoms resolved post-operatively and during each follow-up, rigid nasal endoscopic examination had no significant finding and hence no imaging was repeated.

4. CONCLUSIONS

In conclusion, pleomorphic adenoma should be considered among the differential diagnoses for a unilateral nasal cavity mass, despite its rarity. Early detection is necessary so that complete excision can be performed at an earlier stage to avoid recurrence. Long-term follow-up is required due to the risk of malignant transformation.

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