Case Report

Pleomorphic adenoma of the nasal cavity- an unusual presentation

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ABSTRACT

Pleomorphic adenomas (mixed tumors) are the most common benign tumor of the major salivary glands. In addition, they may also occur in the minor salivary glands of the hard and soft palate. Intranasal pleomorphic adenomas are unusual. We report a rare case of large sized pleomorphic adenoma arising from the nasal septum. A 42-year-old man presented with a 3 month history of multiple episodes of nasal bleeding and obstruction on right side of nose. On examination we found a non-tender firm mass extending upto the nasal vestibule which bled on probing. Computed tomographic scans revealed a mass in the right anterior nasal cavity and spur on left side. Paranasal sinuses, posterior choanae and nasopharynx were normal. An intranasal endoscopic approach was used to achieve a wide local resection along with coagulation of base and spurectomy on the left side. The mass was 2.5×2.0 cm with a broad based attachment of 1.0 cm on the nasal septum. The microscopic finding showed a lobular and duct-like structures consisting of a loose chondromyxoid stroma suggestive of a pleomorphic adenoma. Large sized nasal cavity mass with history of epistaxis and which bleeds on probing should be finally assessed under general anaesthesia. It should be excised endoscopically and subjected to histopathological examination.

Keywords: Pleomorphic adenoma, Nasal septum, Endoscopy

INTRODUCTION

Pleomorphic adenoma (mixed tumors) is the most common tumour of the salivary glands. It is a benign tumour, arising mainly in the major salivary glands (65%), especially in the parotid and, less frequently, in accessory salivary glands (35%).¹ A small minority (8%) arises from minor salivary glands and is located in oral cavity, neck and nasal cavity. In the upper respiratory tract, the most favoured site of origin is the nasal cavity, followed by the maxillary sinus and the nasopharynx.² Intranasal pleomorphic adenomas generally arise in the nasal septal mucosa (reported incidence varies between 82.5% and 90%).¹ Though they can occur at any age, the peak incidence is seen in 3rd-6th decade, more commonly in females.³ Intranasal pleomorphic adenomas are commonly misdiagnosed because they are highly cellular and few myxoid stroma as compared to pleomorphic adenomas of major salivary glands.⁴ We

report a large sized nasal septal pleomorphic adenoma in 40 year old male and discuss some points on this rare entity.

CASE REPORT

A 40-year-old man presented with a 3 month history of progressive right nasal obstruction, multiple episodes of epistaxis with mild rhinorrhoea, postnasal dripping sensation and no other complaints. There was no history of visual defect, atopy or previous trauma to the nose. His weight was stable and his general health was satisfactory with no palpable neck nodes.

Anterior rhinoscopy revealed a non-tender, firm red pinkish mass, completely filling the right nasal cavity extending up to the vestibule. Spur was present on the left side. On diagnostic nasal endoscopy, a large mass filling the right nasal cavity was seen. There were minimal

changes in size of the mass on nasal decongestion. A probe could not be passed around the mass and attachment could not be identified as the mass started bleeding. A nasal spur at the vomerochondrine junction on the left side was found. So it was decided to examine the mass under general anaesthesia and proceed accordingly.

X-Ray chest, ESR and routine investigations were within normal limits. Radiological examination (CT scan of nose and paranasal sinuses) demonstrated well pneumatized para-nasal sinuses and a hypodense soft tissue mass in the anterior aspect of the right nasal cavity. Paranasal sinuses, posterior choanae and nasopharynx were normal as shown in Figure 1. The smooth surface, preservation of mucosal lining and the localised nature of the mass were consistent with a benign lesion.

Figure 1: CT scan of the nasal cavity, axial section, showing a homogenous spherical mass occupying anterior part of the right nasal cavity. The maxillary sinuses, posterior choanae and nasopharynx are clear.

The patient was given general anaesthesia and nasal decongestion done. The mass was inspected for its attachment and it was found to have a broad based attachment of about 1 cm on the anterior nasal septum approximately about 2.0 cm posterior to mucocutaneous junction. The mass was about 2.5×2.0 cm with a broad pedicle of about 1.0 cm as shown in Figure 2. Local infiltration was given subperichondrially on the nasal septum and then the mass was excised in toto along with the adjoining perichondrium of the nasal septum as shown Figure 3. Bleeding controlled with electro-coagulation. Spurectomy on left side was done endoscopically. Both nasal cavities packed gently. Nasal packs removed after 48 hours and the postoperative course was uneventful. Further follow up after one month was symptom free. Periodic nasal endoscopy was normal.

Histological analysis of the tumor revealed spindle shaped myoepithelial cells and glandular epithelial cells dispersed in a background of myxomatous stroma,

confirming a benign pleomorphic adenoma as shown in Figure 4. There was no focus of malignant change and the resection margins were clear.

Figure 2: Endoscopic picture showing the broad based attachment of the mass to the nasal septum. No other landmarks are defined.

Figure 3: Endoscopic picture after removal of the mass showing the well-defined a) middle turbinate and b) the cauterized attachment of the mass.

Figure 4: Histology section (hematoxylin and eosin staining, 40X) demonstrating increased myoepithelial cellularity and a relatively small stromal component suggestive of a pleomorphic adenoma.

DISCUSSION

The most common tumors of the major salivary glands are pleomorphic adenomas, but are rarely found in the respiratory tract (via minor salivary glands). Cases have been reported in the nasal cavity, paranasal sinuses, nasopharynx, oropharynx, hypopharynx, and larynx. In the upper respiratory tract, the most favoured site of origin is the nasal cavity.⁵ Although majority of minor mucous and serous glands are located in the lateral nasal wall, pleomorphic adenomas in the nasal cavity mostly originate from the nasal septum. Larger studies of intranasal pleomorphic adenoma include 41 cases reported by Furukawa et al and 59 cases reported by Wakami in Japan.^{6,7} However the number of cases of nasal cavity pleomorphic adenoma reported in India are very few and hence the present case is being reported.

Though they can occur at any age, the peak incidence is seen in 3rd-6th decade, more commonly in females.³ Typical presenting features include unilateral nasal obstruction (71%) and epistaxis (56%). Other signs and symptoms include a mass in the nose, nasal swelling, epiphora, and mucopurulent rhinorrhea.⁶

However our patient was a 42 year old male presenting with symptoms of obstruction and epistaxis. The size of the mass in our case was unusually large (2.5×2×1cm) and it bled on probing which made the clinical possibility of a pleomorphic adenoma quite low. Cases reported by Wakami had sizes of 1.5×1.5×1.2 cm and 0.6×0.6×0.6 cm.⁷ We had also reported such a case with size of 0.5×0.5 cm in the year 1989.⁸ We had regular follow-ups for more than 10 years and the patient had no recurrence.

Pleomorphic adenomas are characterised by epithelial tissue mixed with tissues of myxoid, mucoid or chondroid appearance. Histologically, pleomorphic adenoma of the aerodigestive tract may resemble aggressive epithelial tumors because of the high cellularity and lack of a stromal component. Importantly, this feature is not in keeping with that of the major salivary glands which demonstrate relatively reduced myoepithelial cellularity. Occasionally, pleomorphic adenomas are composed almost entirely of epithelial cells with few or no stromata. This can lead to misdiagnosis as a carcinoma.⁴

CT scan and MRI are useful imaging modalities. On CT, pleomorphic adenomas may appear non-homogenous because of mesenchymal stroma, cystic degeneration and necrosis but nasal pleomorphic adenomas appear homogenous because they are more cellular.⁹

Wide local resection with histological clear margin is generally agreed as the treatment of choice for benign salivary gland tumors keeping in view its recurrence. Postoperative radiotherapy has been advocated by some authors in circumstances where residual disease was apparent. In the case of intranasal pleomorphic adenoma,

several surgical approaches have been used to achieve wide local clearance and these include intranasal, transnasal endoscopic, external rhinoplasty, lateral rhinotomy and mid facial degloving.⁴

The prognosis for intranasal mixed tumors is better than for those in other ectopic sites, because they show early symptoms leading to an early diagnosis. Involvement of the surrounding structures such as bone is rare since the tumors have sufficient space to expand within the nasal cavity.⁴ A neoplasm originating from the nasal septum has a higher risk of malignancy compared to other sites in the nose.¹⁰

CONCLUSION

Pleomorphic adenomas are rare tumors of the nasal cavity. They have a higher epithelial and lower stromal component compared to their major salivary gland counterparts and may be misdiagnosed as carcinoma at an early stage leading to more aggressive treatment. We suggest consideration of this diagnosis if the patient has unilateral nasal obstruction or epistaxis as a presenting complaint and suggestive findings on CT. Transnasal endoscopic resection of the mass with excision of surrounding mucosa/mucoperichondrium around its attachment is an ideal treatment of pleomorphic adenoma of nasal septum to prevent its recurrence Long-term follow-up with periodic diagnostic nasal endoscopy is thus essential.

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