

# Pleomorphic adenoma palate: Major tumor in a minor gland

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Nanda Kishore Sahoo, Mohan N. Rangan, Rajashekhar D. Gadad

Department of Dental Surgery, Armed Forces Medical College, Pune, Maharashtra, India

Address for correspondence:

Dr. Maj. Mohan N. Rangan, Department of Dental Surgery, Armed Forces Medical College,  
Pune - 411 040, Maharashtra, India.  
E-mail: mohevas@gmail.com

## ABSTRACT

Pleomorphic adenoma (PA) is the most common benign mixed salivary gland neoplasm that accounts for 60% of all benign salivary gland tumors. It has diverse histological presentation and occurs in both major and minor salivary glands. PA of minor salivary gland in the palate is a common entity. We report the case of a 45-year-old female who presented with a painless slow growing swelling of palate over the last 20 years. The mass was extending to oropharynx causing mechanical obstruction of airway. Magnetic resonance imaging (MRI) depicted an oval-shaped mass occupying oropharynx and displacing the tongue inferiorly. Fine needle aspiration cytology (FNAC) was suggestive of PA. The entire tumor mass was excised along with overlying mucosa. Histopathological examination confirmed diagnosis of PA of minor salivary gland. There has been no recurrence of the lesion since 1 year.

**Keywords:** Adenocarcinoma, adenoid cystic carcinoma, pleomorphic adenoma

## INTRODUCTION

Pleomorphic adenoma (PA) is the most common tumor (60%) of major and minor salivary glands, nearly 70% of the tumors of minor salivary glands are PAs, and the most common intraoral site is the palate, followed by upper lip and buccal mucosa.<sup>[1]</sup> Studies have reported that in world population 13.9-51.4% of all salivary gland tumors arise from an intraoral site and 34.7-67.1% of them are benign.<sup>[2]</sup> This is a tumor of diverse histological and topographical presentation. The differential diagnoses are many and atypical presentations of this tumor are not uncommon. The importance of lesions lies in the fact that they are more likely to be malignant when associated with minor salivary glands (50%).<sup>[3]</sup> Benign tumor, though has the potential to attain huge size, generally is a symptom-free mass. Fine needle aspiration (FNA) is a sensitive and specific diagnostic tool for determining severity of neoplasm as well as to identify histological subtype. The aim of this case report is to present histopathologically diagnosed PA of palate in a 45-year-old female, to emphasize its peculiar nature of growing slowly for over 20 years to a size of 6 × 6 cm, and yet asymptomatic. It can

be misdiagnosed as malignant tumor on blind clinical diagnosis, and hence this presentation also emphasizes on the need for awareness of its diverse presentation by the examining clinician that could influence the outcome greatly and for histopathological diagnosis of such growth before any definitive treatment.

## CASE REPORT

A 45-year-old female presented with a slow growing swelling, of approximately 20 years duration involving her hard and soft palate junction on the left side, which was peanut sized when she first observed. The lesion always had been asymptomatic, with no associated pain or paresthesia. The patient's medical history was noncontributory. She had no known allergies and had not undergone any surgeries of head and neck. She had no complaints of pharyngeal or airway obstruction. General physical examination revealed a well oriented and moderately built individual with no signs of any systemic illness. The patient presented a typical 'hot potato in mouth' speech. The clinical examination revealed nonulcerated, dome-shaped,

palatal swelling on her hard and soft palate junction, crossing the midline [Figure 1]. The mass had a bosselated surface and overlying mucosa was cherry red and stretched. The lesion was multinodular, firm, and nontender on palpation. Magnetic resonance imaging (MRI) report revealed a well-defined, multilobulated mass measuring  $3.2 \times 5.5 \times 6.3$  cm Antero-Posterior  $\times$  Transverse  $\times$  Cranio-Caudal (AP  $\times$  TR  $\times$  CC) and is hypointense on T1W1 and heterogeneously hyperintense on T2W1 with multiple well-defined areas of low cellularity within. The mass had well-enhanced soft tissue density without any invasion to adjacent tissues, displacing posterior third of the tongue downward [Figure 2].

FNA biopsy was performed, which was suggestive of PA. All preoperative blood and urine investigations were done, which were within normal limits. The patient was intubated through endotracheal tube by fiber-optic guidance and was operated for wide local excision of the mass and primary closure of adjacent mucosa. The excised mass was  $7 \times 6$  cm [Figure 3]. Following excision of tumor, surgical wound [Figure 4] was closed in layers in a tension-free water tight fashion [Figure 5]. The excised mass was sent for histopathological examination, which revealed stratified squamous epithelium covering connective tissue and underlying connective tissue showed the cells arranged in sheets and duct-like pattern with a mucoid background [Figure 6]. This was confirmatory of PA. The specimen was weighed 95g [Figure 7]. The patient's postoperative course was uneventful. The healing was satisfactory. No recurrence was observed after a follow-up period of 1 year [Figure 8].

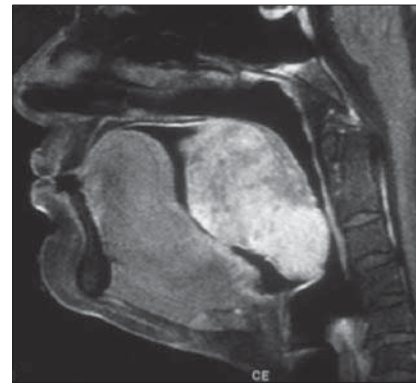
## DISCUSSION

PA of minor salivary gland is most common in palate (10%), followed by lip (4%).<sup>[4]</sup> The unusual sites are sinuses, larynx epiglottis, and trachea. PAs have also been reported in tongue,<sup>[5]</sup> soft palate,<sup>[3]</sup> uvula,<sup>[6]</sup> and even external auditory canal.<sup>[7]</sup> Though the case we presented is not a rare one, these kinds of tumor are most often malignant and are often misdiagnosed. Clinically the patient presented a solitary, painless, slow growing, well-circumscribed palatal lump which is typical presentation of such tumor. The mechanical symptoms most commonly manifested by tumors of this location are dyspnea, dysphagia, acute airway obstruction, and obstructive sleep apnea.<sup>[8]</sup> In our case the presenting complaints were dysphagia and difficulty in speech. Surprisingly a tumor of  $7 \times 6$  cm in size did not produce any respiratory distress.

The main diagnostic modalities are FNA biopsy and imaging. Cytological finding in PA are typically of mixed epithelial cells and mesenchymal elements. These features were clearly illustrated in our case. The histopathological confirmation is mandatory in operating these tumors. However, differentiation from adenoid cystic carcinoma and polymorphous low grade adenocarcinoma may be difficult with FNA alone.<sup>[9]</sup> Imaging with ultrasound, MRI, or computed tomography (CT) may be used depending on the site and size of tumor.<sup>[10]</sup> In our case, MRI was primarily used to determine size and more importantly infiltration of lesion into the surrounding tissue. We found the lesion to be a  $5.5 \times 6.3$  cm soft tissue dense mass, not involving adjacent tissues, and displacing



**Figure 1:** Clinical presentation of the tumor



**Figure 2:** Magnetic resonance image of the tumor



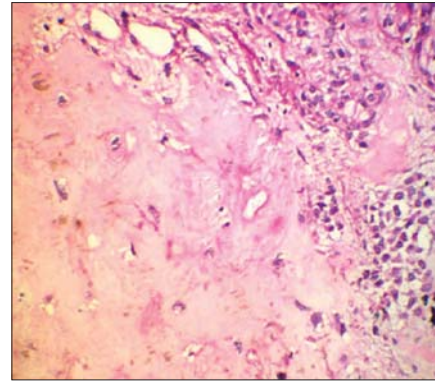
**Figure 3:** Excised tumor



**Figure 4:** Surgical wound following tumor excision



**Figure 5:** Wound closure



**Figure 6:** Histological composition of both epithelial and stromal elements (H&E, x10)



**Figure 7:** The specimen being weighed



**Figure 8:** Postoperative magnetic resonance image

the tongue. There was variable pattern in T2-weighted image revealing the cellularity within.

Surgical excision is the treatment of choice. Longevity and recurrence are risk factors for malignant transformation. The propensity for malignant transformation is documented to be 1.9-23.3%.<sup>[11]</sup> The primary goal of excision should be complete removal of mass without risking recurrence. We performed complete excision of tumor with overlying mucosa and surgical wound was closed with advancement of adjacent mucosa. This produced an excellent result. The excised region can be left to heal by secondary intention also. In this case the tumor itself served as tissue expander, to advance adequate mucosal coverage, and achieve primary healing.

## SUMMARY AND CONCLUSION

PA, though a common entity, is still a challenging tumor for pathologist, radiologist, and the surgeon. Its diverse histological and topographical property makes the tumor special. The examining clinician and treating surgeon must be aware of its recurrence, longevity, and malignant potential if incorrectly diagnosed or treated.

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