

Case Report

## Solitary palatal mass: A case report

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Received 8 May, 2015; Accepted 16 June, 2015

**Pleomorphic adenoma of the palate arising de novo is a rare entity. A case of pleomorphic adenoma of the soft palate in a 28-year-old male is presented. The article discusses the etiopathogenesis, clinical presentation, differential diagnosis, and its management. Minor salivary gland tumors may be present with a diverse range of presentations posing a challenge to even the most competent clinicians and pathologists.**

**Key words:** Pleomorphic adenoma, minor salivary gland, soft palate.

### INTRODUCTION

Minor salivary glands, with estimated number between 600 and 1000, exist as small, discrete aggregates of secretory tissue present in the submucosal areas distributed throughout the oral cavity. The greatest number of these glands is in the lips, tongue, buccal mucosa, and palate. Each gland has a single duct which secretes, directly into the oral cavity, and its composition may be serious or mucous or mixed (Nanci, 2012).

Palatal pathologies can pose diagnostic difficulties to the clinicians. A swelling or a growth in the palate can result from a range of pathologies, such as periapical lesion, periodontal diseases, reactive process, minor salivary gland pathologies, or a neoplastic process (Huston and Brown, 1993; Kusama et al., 1993). In the differential diagnosis of palatal lesions, dental etiology must be given paramount importance because of its wide range of presentations. Salivary gland tumors too deserve consideration due to the presence of numerous minor salivary glands in the palate. Tumors arising from the minor salivary glands are relatively uncommon clinical entities, accounting for 10 to 25% of all salivary gland

tumor (Mubeen et al., 2011). Pleomorphic adenomas, the commonest of the salivary gland tumors make up around 65% of all salivary gland tumors and are the most common type of tumors of the minor salivary glands (Mubeen et al., 2011).

This study reports a case of pleomorphic adenoma of the soft palate in a 28-year-old male patient.

### CASE REPORT

A 28-year-old male reported to the dental out patient department with a complaint of swelling in the palate since 1 year (Figure 1). The patient is apparently healthy with no associated habits. History revealed that the patient had noticed the swelling a year ago. It was small in size and progressively increased during this period with no associated functional disturbances. Clinically, a single, large, diffused swelling is seen on the left side of the hard and soft palate roughly measuring 3 cm in diameter extending anteriorly to an imaginary line drawn

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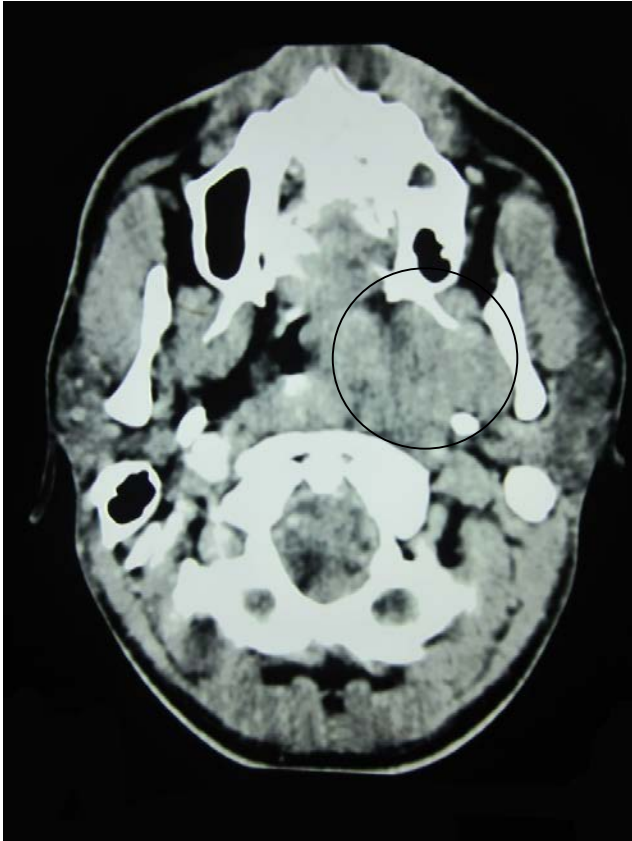
**Figure 1.** Patient profile photograph.



**Figure 2.** A diffuse swelling on the left side of the hard and soft palate involving the faucial pillars and uvula.

between the second maxillary molars to beyond the adenoids posteriorly. Medially, it crosses the midline by a centimeter to the vestibule and faucial pillars laterally (Figure 2). The surface of the swelling appears smooth and diffusing into the surrounding normal mucosa. On palpation, the surface is smooth, soft to firm in consistency, nontender, and compressible in nature.

Based on the history and clinical presentation, a benign palatal neoplasm was considered. Following this, the patient was subjected to conventional radiographs which were non-contributory. Computed tomogram of the region revealed a lobulated, mildly and heterogeneously enhancing lesion approximately measuring  $4.9 \times 3.6 \times 3.9$  cm was seen involving the left prestyloid parapharyn-



**Figure 3.** The CT axial section reveals, a well lobulated, heterogeneously enhancing lesion involving the pre styloid parapharyngeal space and pharyngeal space resulting in the deviation and compression of the oropharyngeal airway to the right.

geal space and pharyngeal mucosal space extending medially and causing significant deviation and compression of the oropharyngeal airway to the right. Superiorly, the lesion is seen extending into the left-side of the nasopharynx with obliteration of the eustachian orifice and the rosenmuller fossa. The anterior extent is seen abutting the left side of the posterior soft palate (Figure 3). These features give an impression of a possible neoplastic pathology of the minor salivary gland. Following investigations, with an informed consent, an excisional biopsy was performed, and the lesion was removed totally (Figure 4). The histopathology revealed glandular epithelium with connective tissue components surrounded by fibrous capsule. These epithelial components were found arranged in the form of nests, sheets, and chords. A few ductlike structures filled with eosinophilic coagulum were present. The connective tissue showed dense, irregularly arranged collagen fibers with plasmacytoid cells in a loose myxomatous area with the presence of a few keratinpearls. Increased vascularity

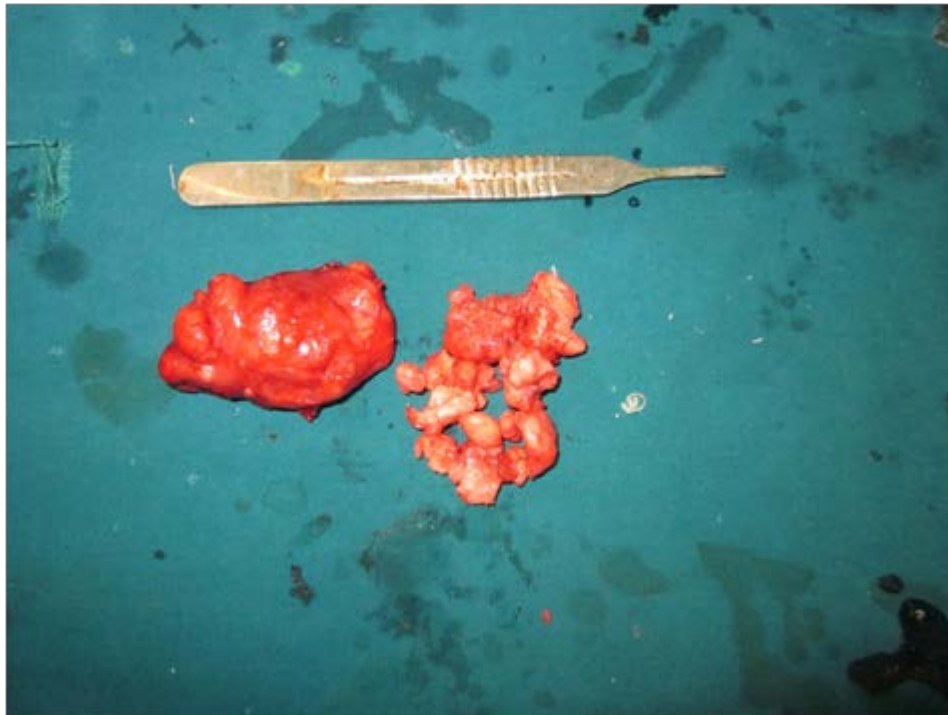
within the section was also appreciated (Figures 5 and 6). The histopathological features suggested *pleomorphic adenoma* of the soft palate.

The patient was under clinical review and regular follow up for one year duration with no clinical evidence of recurrence and functional impairment (Figure 7).

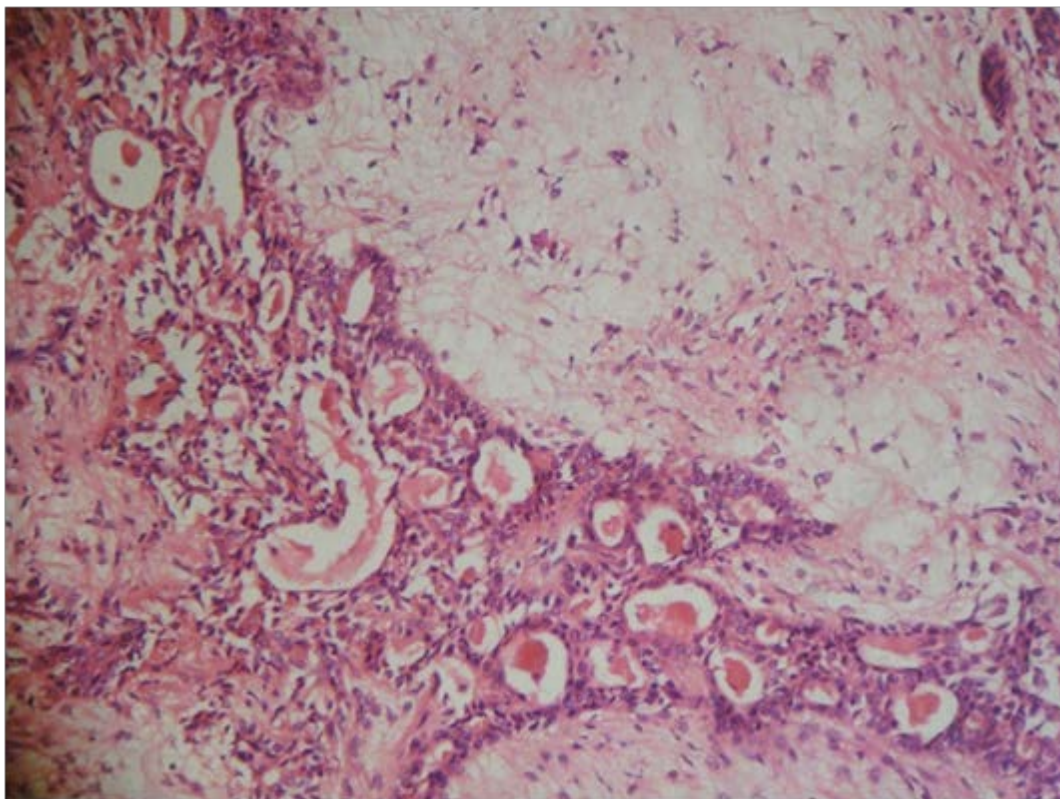
## DISCUSSION

Minor salivary gland tumors constitute 2 to 4% of all head and neck malignancies and 10% of the tumors within the oral cavity (Sanchez et al., 2005). Minor salivary glands contribute about 22% of all salivary gland tumors (Cohen, 1986; Spiro, 1986; Waldron et al., 1988). Pleomorphic adenoma is the most common minor salivary gland tumor (Sumer and Celenk, 2008). The current theory of histogenesis centers around the myoepithelial cell and a reserve cell in the intercalated duct. Ultrastructural studies have confirmed the presence of both ductal and myoepithelial cells in the pathologic process. Workers have postulated that the myoepithelial cell is responsible for the morphologic diversity of the tumor, including the production of the fibrous, mucinous, chondroid and osseous areas (Shafer et al., 2005). The hard palate is the most common site followed by the lip, pharynx, and retromolar area (Cohen, 1986; Spiro, 1986; Waldron et al., 1988). Intraoral pleomorphic adenoma is usually presented as an asymptomatic slow-growing mass, in the fourth and fifth decades (Feinmesser and Gay, 1983). Moshy et al. in their study postulated higher predilection among older patients (Moshy et al., 2010). However, Waldron et al. favored a younger age group (Waldron et al., 1988).

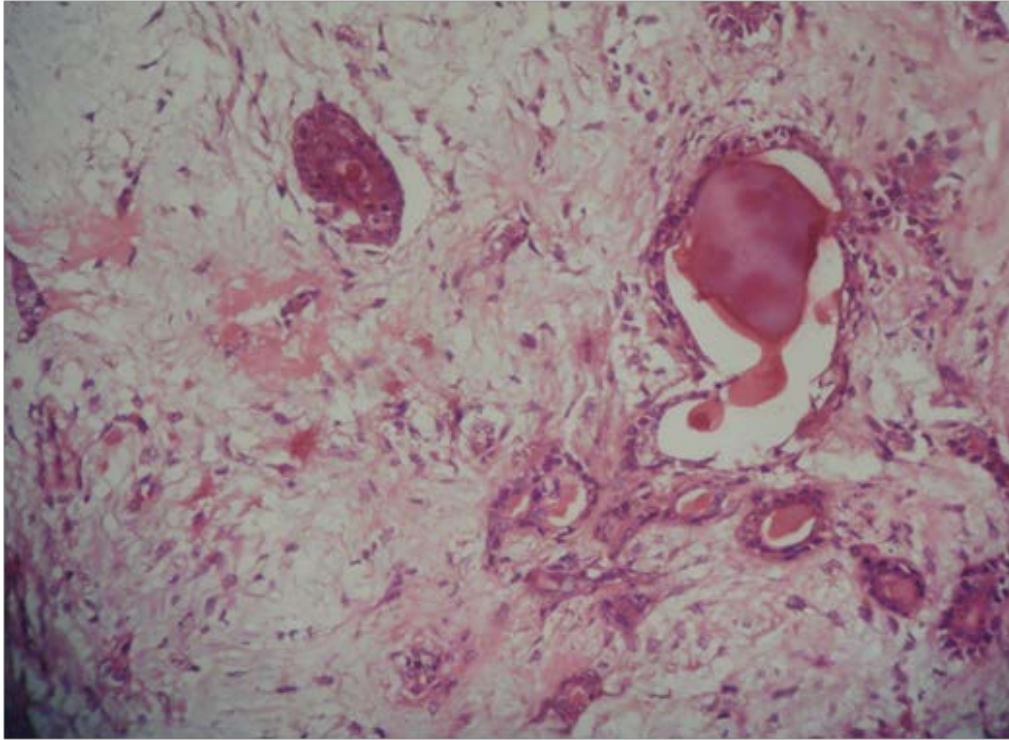
Most studies have shown that minor salivary gland tumors are more common in females than the male counterparts (Loyola et al., 1995), with a male:female ratio of 1:1.8 to 1:2.4 (Kusama et al., 1993; Rivera-Bastidas et al., 1996). The palate has the highest concentration of minor salivary glands in the upper aero digestive tract and the most favoured site for both benign and malignant minor salivary gland tumors. Pleomorphic adenoma of the hard palate is typically a firm or rubbery submucosal mass without any secondary changes (Sanchez et al., 2005). The differential diagnosis should include palatal mass, odontogenic and non-odontogenic cysts and tumors, and salivary gland neoplasms. Palatal abscess, the most frequent swelling of the hard palate deserves first consideration. This could occur as a result of infected/non-vital tooth in close vicinity or a localized periodontal defect. However, in our case, the absence of these findings demerits its consideration. Considering odontogenic and nonodontogenic cysts should be based on a thorough clinical exploration of the swelling and demonstration of its cystic nature. The presence of soft



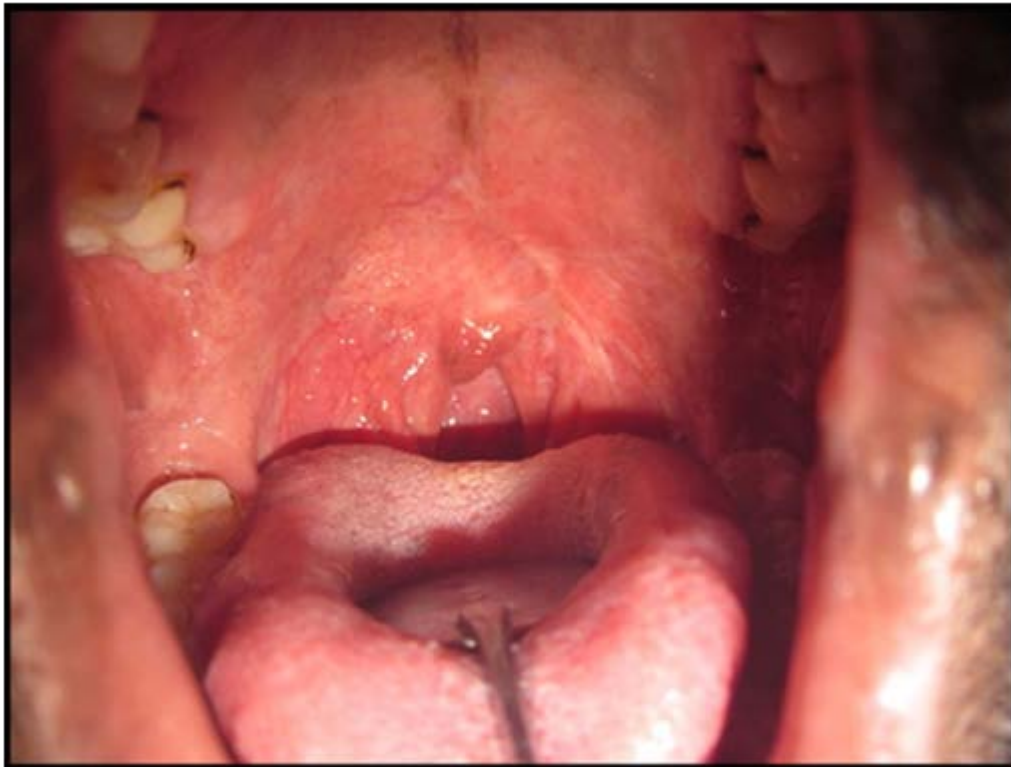
**Figure 4.** Surgically excised lesion with underlying periosteum.



**Figure 5.** Photomicrograph (20×) shows the epithelial components are arranged in the form of nests, sheets and chords with dense irregularly arranged collagen fibres and plasmacytoid cells.



**Figure 6.** Photomicrograph (40x) shows few duct like structures filled with eosinophilic coagulum and increased vascularity.



**Figure 7.** Follow up Intra oral photograph (1 year).

tissue components and minor salivary glands warrants us to consider soft tissue and salivary gland tumors. Lipoma, neurofibroma, neurilemmoma, pleomorphic adenoma, mucoepidermoid carcinoma and adenoid cystic carcinoma need consideration.

Pleomorphic adenoma is the most common salivary gland tumor, which presents as a smooth, submucosal mass or nodule, and its neoplastic growth rate is usually indolent. Mucoepidermoid carcinoma is the most common malignant salivary gland neoplasm. The minor salivary glands constitute the second most common site, the palate which is the most preferred site for this mixed tumor (Neville et al., 2009). It is usually presented as an asymptomatic, slow-growing swelling, fluctuant to firm in consistency. Adenoid cystic carcinoma, the most commonly encountered pathology in the palate may present as a painful or an asymptomatic swelling with secondary changes such as dysphagia and hoarseness of voice suggestive of malignant changes (Mubeen et al., 2011). The treatment of choice for pleomorphic adenoma involving the minor salivary glands in the palatal region will require a wide excision with the removal of bone if it is involved. A simple enucleation is thought to cause high local recurrence due to the rupture of the capsule or spillage of tumor cells into the surrounding area (Mubeen et al., 2011).

### Conflicts of interest

The authors declare that they have no conflicts of interest.

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