**CASE REPORT**

# Pleomorphic adenoma of palate: A case report

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**ABSTRACT**
The majority (50%) of tumors in the major and minor salivary glands is pleomorphic adenomas. The palate, upper lip, and buccal mucosa are the most frequent intraoral sites for pleomorphic adenomas, which include 70% of malignancies of the minor salivary glands. In most instances, pleomorphic adenoma does not result in ulceration of the underlying mucosa and presents as a painless, hard lump. Except when it affects the hard palate, it is often movable. Mixed intraoral tumors, particularly those found in the palate, lack a distinct capsule. Palate lesions commonly involve the periosteum or bone. In about 25% of benign mixed tumors, malignant transformation occurs. Radical surgery is the only option for pleomorphic adenoma. Poor resection results in local recurrence. This case report discusses a case of pleomorphic adenoma of the hard palate in a young lady after a complete excision of the tumor, which is confirmed by biopsy.
**Keywords:** Benign mixed tumor, hard palate, pleomorphic adenoma, salivary gland, case report


## INTRODUCTION

The most frequent mixed benign tumor of the major salivary glands, particularly the parotid gland, is a pleomorphic adenoma. 80% of these cancers start in the parotid gland, while only seven percent start in the minor salivary glands.[1] Palate is the most commonly affected site in the oral cavity. Other intraoral affected sites include the upper lip, buccal mucosa, tongue, and gingiva.[4]

Women are more likely than males to develop pleomorphic adenoma, which is most common in the fourth through sixth decades of life. On the oral mucosa, it typically appears as a single, painless lump.[7]

Pleomorphic describes the variety of the tumor's histology. The capsule, epithelium and myoepithelial cells, and mesenchymal or stromal elements make up the fundamental components. The capsule's presence and thickness vary.[2]

Epithelial stem cells give rise to ductal structures and are combined with mucoid/myxoid, cartilaginous, or hyalinized mesenchymal components.

The treatment of pleomorphic adenoma is surgical excision. Pleomorphic adenoma enucleation is not appropriate due to tumor recurrence, which is brought on by insufficient surgical removal of the lesion. [9]

We describe a case of a palate pleomorphic adenoma that was excised under local anesthesia.

## CASE REPORT

A 30-year-old female patient reported to the department of Oral and Maxillofacial Surgery at Maharana Pratap College of Dentistry and Research Center, Gwalior.

The patient´s chief concern was swelling in his upper left back tooth region for one month. History revealed that the swelling was painless and gradually grew over six months to its present size. On general examination, all the vital signs were within the normal range with no history of diabetes or hypertension.

On intraoral examination, a single, ovoid-shaped swelling measuring 1.5cm x 1.5cm on the left posterolateral surface of the hard palate. Medially, it extends from the midline of the hard palate and the distal aspect of the region of 27 laterally. The overlying mucosa was healthy and smooth in appearance. On palpation, the swelling was unilocular, nontender, non-pulsatile, firm and

immovable with well-defined margins. The mucosa over the lesion was stretched [ Figure:1].

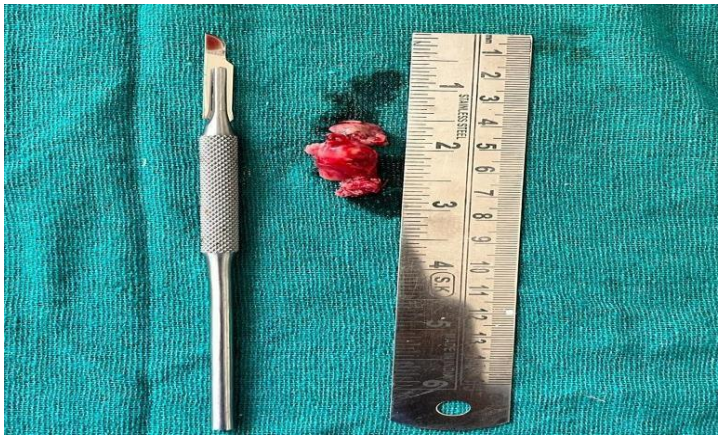
The Orthopantomography [O.P.G] revealed localized periodontitis in the region of 28 and root stump 27 and proximal caries 46 respectively. [ Figure: 2] As the second molar (27) was extracted but the swelling has not subsided. The line of treatment planned was surgical excision of mass under local anesthesia followed by the biopsy of the excised mass. [ Figure: 3a,3b,] The lesion was in the form of an ovoid well demarcated, partially encapsulated, red-white, partly rubbery to firm mass, measuring 1.5x 1.5cm, with solid surface. [ Figure: 4a,4b,4c] The result of the histopathological examination of specimen taken after the surgery and confirmed the diagnosis of pleomorphic adenoma. [ Figure: 5]

**[Figure:1 soft swelling seen in palate region]**

**[Figure: 2 O.P.G of patient]**

**[Figure: 3a. Horizontal incision is given]**

**[Figure: 3b. Excision of lesion]**



**[Figure: 4. 1.5x1.5mm complete excision of mass]**

**[Figure:4a. closure is done with silk 3-0]**

**[Figure: 4b. suture was removed after 7days]**

**[Figure: 4c. complete healing take place after 14days]**

**[Figure: 5 histopathological examinations]**

## DISCUSSION

Small salivary glands account for 20–40% of all tumor cases. The likelihood that it manifests depends on how minuscule the damaged salivary gland malignant acts are.[18]

Most frequently observed in 4th and 6th decades, age group patients are primarily female, from the third to the sixth decades. It primarily affects the hard and soft palate due to the fact that the majority of small salivary glands are situated in this region. Pleomorphic adenoma usually presents as a progressive slow growing swelling which is asymptomatic and firm in consistency.[14]

The embryological origin of pleomorphic adenoma is different. It has both mesenchymal and epithelial origins.

They develop from myoepithelial and intercalated cells. The fibrous capsule clearly separates the bulk from its surroundings. The surrounding salivary parenchyma, which is made up of the tumor and is known as the false capsule. Fibrosis causes the capsule to form.[23]

Typically, the pleomorphic adenoma is a well-defined, encapsulated tumor. There is a chance that the capsule isn't complete, which is more typical with small salivary gland tumors.

The history, physical examination, radiographic investigation, and histological examination report all contribute to the differential diagnosis following an examination; odontogenic or non- odontogenic palatal abscess soft tissue tumors like neurofibroma, cysts, neurilemmoma and fibroma.[21]

Palatal abscess can be excluded by examining because it arises from a non-vital tooth in the surrounding defect. The odontogenic and nonodontogenic cysts can be excluded during exploration of mass as they do not reveal its cystic consistency. Myoepithelioma has spindle shaped cells and is a benign epithelial salivary gland tumor.[30]

In terms of radiography, a computerized tomography (CT) scan would be excellent to evaluate the extent of the lesion, bone erosion, and invasion, whereas an MRI would aid in defining the spread of soft tissues.[3]

Histologically, it reveals epithelial and myoepithelial elements arranged in different patterns in mucopolysaccharide stroma. A false capsule may be seen which forms as a result of fibrosis of surrounding salivary parenchyma that got compressed due to a tumor.[28]

The treatment of choice for pleomorphic adenoma should be wide local excision with the removal of the periosteum or bone if they are involved. Simple enucleation of this tumor may lead to a high recurrence rate and should be avoided. Large palatal abnormalities that result from very aggressive tumors being surgically removed are taken into consideration for palatal reconstruction. [17]

In this instance, the patient's palate did not need to be rebuilt because there was no bony invasion. Recurrence rates of these tumors are not seen if adequate surgical excision has been performed.

A recurrence rate of 6% has been noted by Spiro in his evaluation of 1342 patients with benign minor salivary gland neoplasms.[8]

## CONCLUSION

Pleomorphic adenoma of the palate is a very rare entity, usually seen in adult patients. The most common symptom is a slow-growing, painless submucosal mass on the hard palate. Definitive diagnosis lies in the histopathological examination, and treatment is by surgical excision with wide margins. Excellent results are seen if the wound is allowed to granulate and heal by itself. Recurrences are uncommon but may be seen on long-term follow-up.

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