

**Pleomorphic Adenoma of the Soft Palate - A Case Report and Review of Literature**

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**Abstract**

Pleomorphic adenoma is a benign tumor, commonly arising in the Parotid or submandibular salivary glands. It is seen in the palate when minor salivary glands are involved. They appear as a painless firm mass and don't cause ulceration of the overlying mucosa. Here, we present a case report of a patient with a swelling of the soft palate and describe the surgical protocol employed by the author for the excision of the tumor mass. We also describe the various treatment plans described in literature for the same and the pros and cons of employing those methods.

**Key words:** Excision, Minor salivary gland, Pleomorphic adenoma, Palatal tumor

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**Introduction**

Pleomorphic adenoma is a benign tumor, commonly arising in the Parotid or submandibular salivary glands. It may infrequently be present in minor salivary glands, in which palate is the most common site. Other intraoral sites include the buccal mucosa, tongue, floor of mouth, tonsil, pharynx, retromolar area, gingiva and nasal cavity. Pleomorphic adenomas may occur at any age, but mainly they affect patients in the fourth, fifth and sixth decades. Forty percent of them are male, while 60% are female.<sup>1</sup>

It's a tumor of diverse histological and topographical presentation consisting of both epithelial and mesenchymal cells.<sup>2</sup> PA appears as a painless firm mass and, in most cases, does not cause ulceration of the overlying mucosa. Generally, it is mobile, except when it occurs in the hard palate. Intra oral mixed tumors,

especially those noted within the palate, lack a well-defined capsule. Lesions of the palate frequently involve periosteum or bone. It is seen that approximately 25% of benign mixed tumors undergo malignant transformation. Hence the treatment protocol for Pleomorphic Adenoma is a radical surgery. Inadequate resection may lead to local recurrences.<sup>3</sup> A clear surgical plan is key to reducing complication rates in such cases and hence here we discuss the various surgical plans described in the past and the rationale behind them along with the author's preferred choice of treatment.

### Case Report

A 34 year old Female, reported to The Department of Maxillofacial surgery with the chief complaint of a painless swelling slowly growing in size along her soft palate. The swelling was noted 2 weeks back incidentally by her general dentist after which it was referred to a specialist. The swelling was merging with the soft palate anteriorly and posteriorly. Swelling was adherent to the underlying structures and surface was covered with slight erythematous mucosa. The speech pattern of the patient was also disturbed. The lady also complained of difficulty in deglutition because of this swelling. Right submandibular lymph node was palpable measuring 2x2cm in size.



Figure 1: Pre-operative swelling noted on the soft palate

However, there was no history of fever, bleeding or pus discharges from the swelling. The personal history of the patient also did not reveal any smoking, or alcohol addiction.

USG and MRI was advised for the patient which revealed a well-defined oval shaped mass towards the right side of soft palate measuring 28x27x33mm (A-P x TRANS x CRANIO-CAUDALLY). The lesion was capsulated and was suggestive of Pleomorphic Adenoma of the soft palate.

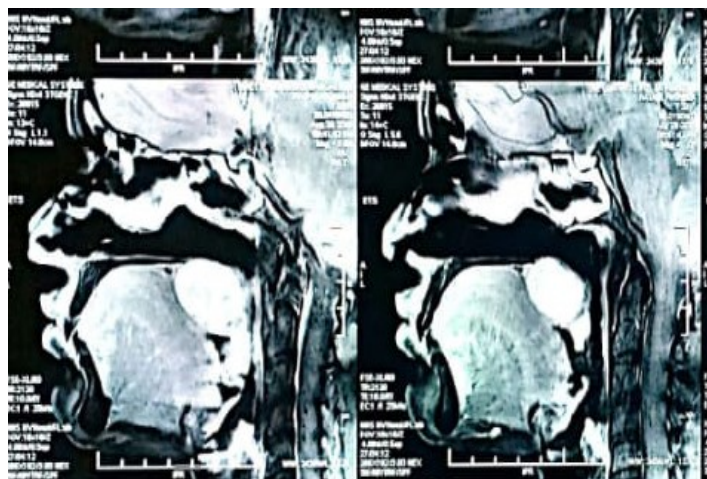


Figure 2: CT Revealing The extension of the Tumor

Treatment: The surgery planned for the patient was Tumor excision under General anesthesia. The patient was prepped and draped under aseptic environment and left nasal intubation was done. Dingman's retractor was applied to achieve good visualization of the surgical field. The Surgical site was infiltrated with Lignocaine of 1:80,000 dilution with adrenaline and an incision was placed at the most dependant part of the swelling using No.15 blade, through the mucosal layer of the palate revealing the capsular lining of the tumor. Blunt dissection was performed to release the encapsulated mass from all the sides. The Tumor was completely enucleated from the socket and the walls were curetted to remove any residual attachments.

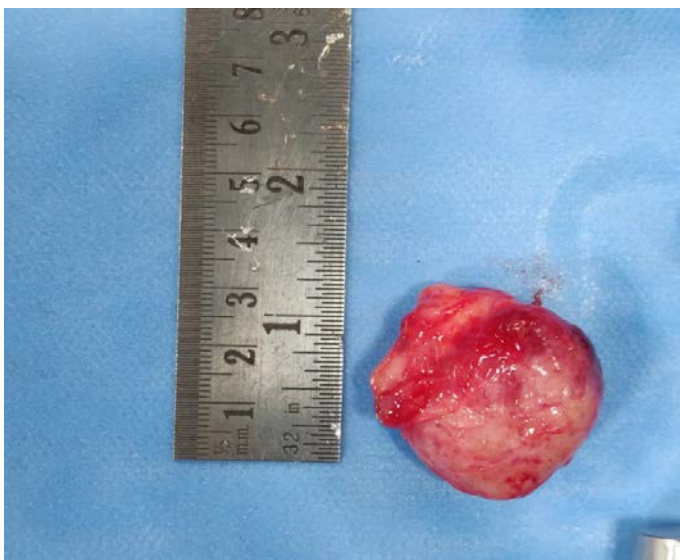


Figure 3: Complete enucleation of the tumor

Primary closure was achieved using 3-0 Vicryl sutures.

A nasogastric/ Ryle's tube was inserted through the patient's nose to assist with feeding for one week of Post-op period. The patient was put on standard antibiotic therapy and post-operatively care was taken to prevent any excessive bleeding, infection and dead space in the palatal region.

Follow-ups were done at 1 week, 1 month and 6 months intervals and no scarring was noted on the palate and the healing was uneventful.



Figure 4: Post-operative healing after 1 month

Her speech also improved one week post-op and there were no further complaints of pain from the surgical site.

## Discussion

Clinically pleomorphic adenoma presents as a slow-growing, asymptomatic, unilateral firm mass that may become large if it is untreated. When originating in the minor salivary glands, it majorly occurs on the soft and hard palate due to the highest concentration of salivary glands in the region. It is seen as a firm submucosal mass without ulceration. Because of its situation in the palate, there is a tendency for patients to present it at an earlier stage than is the case with the tumour of the major salivary glands. Another sign could be in denture wearers, where pain presents earlier due to compression of the palate.

Surgical exposure of the tumor capsule risks spillage and dramatically increases the risk of recurrence, but pleomorphic adenomas of the minor salivary glands have a recurrence rate of 2 to 44%, with the higher values occurring mostly for parotid tumors. Recurrent pleomorphic adenomas often form multiple, separate nodules within the remaining salivary gland, peri-parotid tissues, or scar tissue after the initial surgery. Failure of the treatment plan mainly occurs due to inadequate surgical resection. The most frequent surgical issues are pseudopodia, capsular penetration and tumor rupture while distant metastases might also be seen.<sup>4</sup>

An examination of the periphery of the pleomorphic adenoma shows that it is usually surrounded by a fibrous tissue condensation which one may call a 'pseudocapsule'. In some places this is thick and substantial, and in some places it is thin and delicate.

Most important of all, in some places where the pseudocapsule is incomplete, there is close juxtaposition of tumour tissue and normal palatal glandular tissue. This means that although clinically the swelling may 'shell out' with great ease, tumour cells may be left adhering to the

normal palatal tissue and simple enucleation, therefore, invites recurrence.

At the conservative end of the scale, curettage is still recommended by some authors. Alternatively, there is the reflection of mucosal flaps and enucleation.<sup>5</sup>

Chaudhry, Vickers and Gorlin (1961)<sup>6</sup> recommend enucleation as a 'usually adequate' procedure. Other authorities recommend the avoidance of mucosal flaps and instead favour cutting around the periphery of the tumour and shelling it out from below. Wide local excision of the palatal pleomorphic adenoma may leave a full thickness defect of the soft palate and a surgical method for its repair suggested is a rotational palatal flap based on greater palatine artery.

Reconstruction of the palate is a challenging task. As with any defect, thinking about the goals of reconstruction from both a functional and esthetic point of view will help decide which approach is most suitable for the patient.

Soft tissue defects of the hard palate can be left to granulate. Bony defects of the upper alveolar ridge may cause a significant cosmetic and functional deformity, and therefore free tissue transfer techniques will augment the anterior projection of the face and the soft tissue can be used to seal the oral cavity from the nose.<sup>4</sup> Some authors have also discussed the role of carbon dioxide lasers in the excision of tumors of the soft palate mostly highlighting the benefits of ease of excision and reduced post-operative scarring and disturbances in speech.<sup>7</sup>

The treatment plan which the author recommends is the conservative approach where a mucosal incision is placed and the tumor is enucleated out followed by curettage of the cavity to remove any residual tissue adherent to the walls. This provides a safer and easier method of closure while avoiding post-op complications associated with flaps. Regular follow-ups is key to identify any changes in the palatal mucosa or recurrences associated with the

tumor. This may help to plan further surgical resections if needed for the patient. The need of the hour is to reduce the discomfort of patients and post-operative risks associated with procedures by undertaking surgeries which are safe and understanding the balance between conservative and aggressive protocols which may not significantly alter the end results of the treatment given.

### **Conclusion**

Pleomorphic adenoma of the palate may be a common minor salivary gland tumor, however the treatment aspects of it are not very well documented. The rates of recurrences with different surgical options need to be researched further to give clinicians a better understanding of the risk benefits from each procedure. The author prefers the use of conservative methods of resection but with aggressive curettage of the bony socket to prevent any residual tissue lining to remain. This helps to achieve primary closure of the palatal mucosa which otherwise would require a rotational or free flap for coverage. These procedures are not just cumbersome for the patient but come with many post-operative risks of failures themselves. The need of the hour is to reduce the complication rates associated with the treatment given and to minimize the chances of recurrences of such tumors.

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