

Pleomorphic adenoma of the soft palate: Myoepithelial cell predominant

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ABSTRACT

The pleomorphic adenoma is the most common salivary gland tumor. A remarkable morphological diversity can exist from one tumor to the next. We present here a case of pleomorphic adenoma of minor salivary glands of the soft palate which had predominantly myoepithelial cells with minimal stroma, ductal cells, or tubular elements.

Key words: Adenoma, minor salivary gland, soft palate

Salivary gland tumors most commonly affect the parotid gland (64–80%). The palate is the most frequent site for minor salivary gland tumors (42–54%). The most common neoplasm to affect salivary glands is the pleomorphic adenoma (40%). A relatively high proportion of tumors arising from minor salivary glands are malignant (almost 50%).^[1] It is stated that the smaller the gland, the greater the likelihood of malignancy for a salivary gland tumor.^[2]

Most minor salivary gland tumors present as a smooth, submucosal mass or nodule and the neoplasm's rate of growth is usually indolent. A fine-needle aspiration (FNA) biopsy of the salivary glands is a sensitive and specific diagnostic tool. False positive and false-negative rates range from 1% to 14%.

However, a specific diagnosis can only be made in 60–75% of cases.^[3] The problems in diagnosis are encountered not only in differentiating malignant lesions from benign but also in subtyping the neoplasm. We report a case of a pleomorphic adenoma with predominant plasmacytoid myoepithelial cells arising in minor salivary glands of the

soft palate in a 40-year-old patient. The differential diagnosis is also discussed.

CASE REPORT

A 40-year-old male patient reported to the Department of Oral Medicine and Radiology with a complaint of difficulty in swallowing due to swelling in the palate since 1 week. Swelling was insidious in onset and gradually increasing in size. It was associated with pain while swallowing. Pain was mild, localized, and lasted few seconds. He also complained of decreased appetite and hoarseness of voice since 1 week.

The patient had a history of hypertension. He was on medication for the same. He had a habit of smoking 20-24 bidis per day over the past 20 years.

The patient was moderately built fully conscious and cooperative with normal gait and posture. He was hypertensive with a blood pressure of 160/110. No signs of pallor, icterus, cyanosis, clubbing, or edema were noted. Submandibular lymph nodes were palpable, mobile, enlarged, and non-tender bilaterally.

On intra-oral examination, a solitary, 3 × 3 cm, well-defined, roughly oval swelling was noted on the right soft palate [Figure 1]. The surface of the swelling was smooth with a slight bluish tinge. On palpation, the swelling was non-tender, soft in consistency with well-defined borders. It was fluctuant, not mobile, not compressible, and not reducible.

Also seen intraorally was a solitary, well-defined, shallow ulcer, 1 cm × 0.5 cm in size on the left pterygopalatine raphe area [Figure 2]. The ulcer was surrounded by erythematous

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spots, the floor was fibrin covered and the base of the ulcer was not indurated giving an impression of aphthous ulcer. A solitary, asymptomatic, non-tender, eroded area was also noted on the posterior palate.

Assuming the 1 week duration of the swelling and its bluish discoloration, a provisional diagnosis of hematoma was given. A mucocele and necrotizing sialometaplasia were also considered in the differential diagnosis. Among the salivary group of tumors, malignant tumors such as the mucoepidermoid carcinoma, adenoid cystic carcinoma, and the polymorphous low-grade adenocarcinoma were considered. Among the benign tumors, the pleomorphic adenoma was considered. Conventional occlusal radiographs revealed no bony changes to the hard palate. Computed tomography revealed a well-circumscribed hypodense mass measuring approximately 2.4×1.9 cm, situated in the soft palate predominantly on right side [Figure 3]. The mass was minimally enhanced ruling out any vascular lesion. There was no evidence of calcification. Surrounding bone was normal. Maxillary sinus was not involved. A FNA biopsy was done using a 20-gauge wide bore needle producing 2 ml of straw colored material that showed clusters of epithelial cells arranged singly and in sheets. Spindle-shaped mesenchymal cells were seen in the stromal matrix suggestive of pleomorphic adenoma.

Wide excision of the lesion was performed along with curettage of underlying bone [Figure 4]. An encapsulated mass measuring approximately $2.4 \text{ cm} \times 1.9 \text{ cm}$ was recovered from the soft palate. Histological examination of the mass revealed a highly cellular encapsulated tumor [Figure 5]. Cells were arranged in islands and sheets separated by a myxoid matrix. No ductal, glandular, or tubular structures were noted on the sections. The tumor cells were predominantly plasmacytoid and demonstrated no significant pleomorphism or mitosis [Figure 6]. Based on these findings, a final diagnosis of Pleomorphic adenoma, myoepithelial cell (plasmacytoid type) predominant, of the soft palate was given.

There were no postoperative complications and no recurrence was seen during the 1 year follow-up period.

DISCUSSION AND CONCLUSION

A hematoma is the accumulation of blood within tissues producing a mass. It is usually a result of blunt trauma. In our case, since the swelling was sudden in origin with bluish discoloration in the soft palate (which is frequent site of trauma) hematoma was considered.

Mucocele is typically a dome-shaped mucosal swelling that can range from 1 mm to several centimeters. The mucosa usually imparts bluish translucent hue due to spilled mucin. Characteristically fluctuant but may feel firmer. Although

it is more common in young individual but may also affect patients of all ages. Lower lip is the most common site but mucocele may also occur in the soft palate.

Necrotizing sialometaplasia is a locally destructive inflammatory condition of salivary gland which most frequently affects palatal salivary glands. Although it may occur at any age, it affects adult males more commonly. It affects hard palate more frequently than soft palate. It presents initially as a non-ulcerated swelling which converts into craterlike proliferative ulcer mimicking a malignant lesion.

Mucoepidermoid carcinoma is the most common malignant salivary gland neoplasm. Minor salivary gland of palate is the second most common site of occurrence after parotid gland. It usually presents as asymptomatic slow growing swelling, which is sometime fluctuant to firm with a blue or red color resembling a mucocele clinically.

Adenoid cystic carcinoma occurs most frequently in the palate. It presents as a painful, slow growing mass affecting the surrounding structures in middle-aged adult individuals. In our case, the patient gave associated symptoms of painful swelling in soft palate with dysphagia and hoarseness of voice hinting toward possible malignant lesion.

Polymorphous low grade adenocarcinoma occurs most commonly in palate and usually presents as asymptomatic slow growing swelling. It usually affects older adults and has definite female predilection.

Pleomorphic adenoma is the most common salivary gland tumor. Most pleomorphic adenomas present as a smooth, submucosal mass or nodule and the neoplasm's rate of growth is usually indolent. Rapid enlargement, as in the current case, is unusual in benign tumors and may be seen in high-grade malignant salivary tumors.^[4] In smears from typical pleomorphic adenomas, three cellular components are present in varying degrees: The epithelial/ductal cells that are small and cuboidal arranged in flat sheets or trabeculae that can undergo squamous, oncocytic, or sebaceous metaplasia. Myoepithelial cells are usually present and can be spindled, stellate, or plasmacytoid and are found in clusters, singly, or within the chondromyxoid matrix. The presence of chondromyxoid matrix material is the most specific feature for making the correct diagnosis.^[5] However, in cellular pleomorphic adenomas, there is an abundance of the epithelial or myoepithelial cells with minimal stroma as in our case.

The treatment of pleomorphic adenoma is essentially surgical. Since these tumors are radioresistant, the radiation therapy is contraindicated.^[6] Though these benign tumors are apparently well encapsulated, resection of the tumor with an adequate margin of grossly normal surrounding



Figure 1: Solitary well-defined swelling of palate



Figure 2: Solitary ulcer in the left posterior buccal mucosa

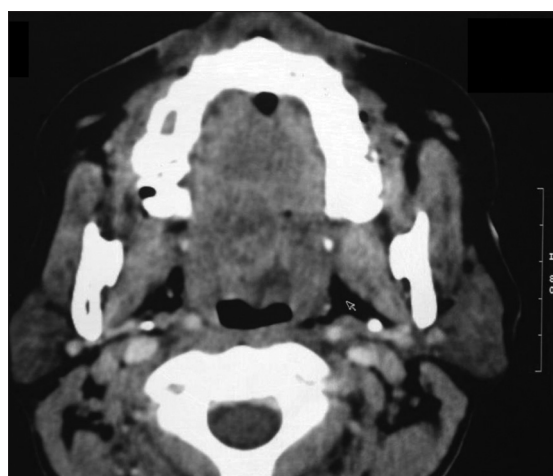


Figure 3: CT scan axial section through the soft palate showing well-defined hypodense mass

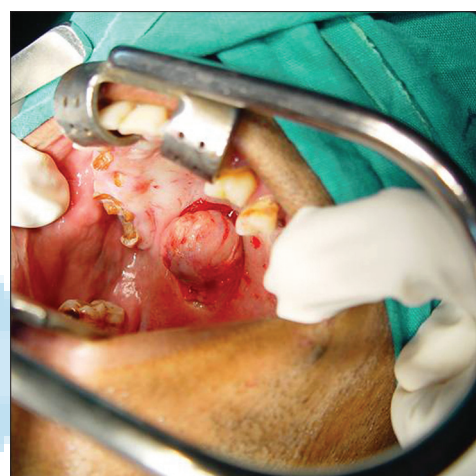


Figure 4: Excisional biopsy

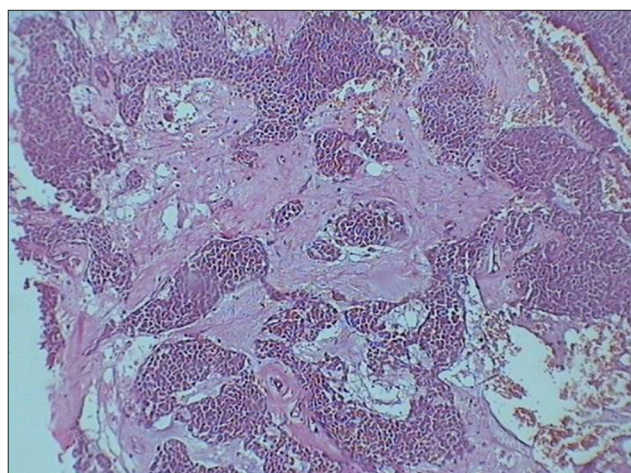


Figure 5: Histopathology of a lesion showing highly cellular encapsulated mass

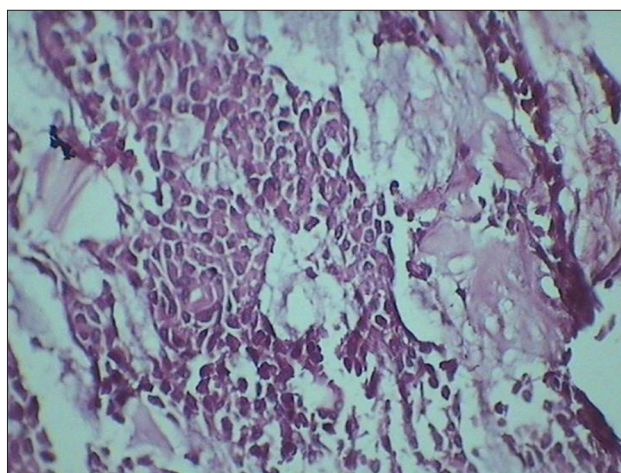


Figure 6: Cells arranged in islands and sheets with minimal stroma

tissue is necessary to prevent local recurrence as these tumors are known to have microscopic pseudopod like extension into the surrounding tissue due to “dehiscence”

in the capsule.^[7] The recurrence of pleomorphic adenoma is attributed to the implantation recurrence due to rupturing of the capsule, Islands of tumor tissue left behind as a behind as a result of surgery, and to multicentricity of pleomorphic

adenoma.^[8] Hence, a follow up of 10-20 years is considered appropriate.^[9]

REFERENCES

1. Waldron CA, El-Mofty SK, Gnepp DR. Tumours of the intraoral minor salivary glands: A demographic and histologic study of 426 cases. *Oral Surg Oral Med Oral Pathol* 1998;66:323–33.
2. Neville BW, Damm DD, Allen CM, Bouquot JE, editors. *Oral and maxillofacial pathology*. Philadelphia: WB Saunders; 2002.
3. Barnes L, Eveson JW, Reichart P, Sidransky D. *World Health Organization classification of tumors: Head and neck tumors*. Lyon: IARC Press; 2005.
4. Weber RS, Palmer JM, El-Naggar A, McNeese MD, Guillamondegui OM, Byers RM. Minor salivary gland tumours of the lip and buccal mucosa. *Laryngoscope* 1989;99:6–9.
5. Pusztaszeri M, Braunschweig R, Mihaescu A. Pleomorphic adenoma with predominant plasmocytoid myoepithelial cells: A diagnostic pitfall in aspiration cytology. Case report and review of the literature. *Diagn Cytopathol* 2009;37:56-60.
6. Rajendran R, Sivapathasundharam B. Tumors of the salivary gland. *Shafers textbook of oral pathology*, 6th ed, Noida, India: Elsevier; 2009. p. 224.
7. Varghese BT, Sebastian P, Abraham EK, Mathews A. Pleomorphic adenoma of minor salivary gland in the parapharyngeal space. *World J Surg Oncol* 2003;1:2.
8. Zbaeren P. Pleomorphic adenoma: Capsule recurrence and carcinoma. Available from <http://www.alexorl.com/alexorlfiles/pptorl2009/017003.pdf>. [Last accessed on 2010 September 02].
9. Pogrel MA. Tumours of the salivary glands: A histological and clinical review. *Br J Oral Surg* 1979;17:47–56.

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