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Case Report 32

Pleomorphic Adenoma of the Palate: Case Series

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Abstract: Pleomorphic adenoma is a common benign salivary gland neoplasm featuring neoplastic proliferation of parenchymatous glandular cells and myoepithelial components, with a rare malignant potentiality. Pleomorphic adenoma is the most common salivary gland tumour, accounting for about 40–70% of all major and minor salivary gland tumours, parotid gland being the most common. Other common sites for intraoral Pleomorphic adenoma are palate, buccal mucosa and lips. Palatal Pleomorphic adenoma presents clinically as a painless, slow-growing mass found on posterior lateral aspect. It can cause atrophy of the mandibular ramus when located in the parotid gland. When found in the parotid tail, it may present as an eversion of the ear lobe. Though it is classified as a benign tumor, pleomorphic adenomas have the capacity to grow to large sizes and may undergo malignant transformation, to form carcinoma ex-pleomorphic adenoma. The aim of this article is to present a case series of palatal Pleomorphic adenoma which was treated successfully by surgical excision.
Keywords: Pleomorphic adenoma, palate, surgical excision

INTRODUCTION

Pleomorphic adenoma is most common salivary gland tumors of the major salivary glands affecting commonly parotid gland and less frequently minor salivary glands. It is named by its architectural pleomorhism seen in light microscope. It can be defined as a benign mixed tumour composed of epithelial and myoepithelial cells arranged with various morphological patterns, demarcated from surrounding tissues by fibrous capsule. Pleomorphic adenoma (mixed benign tumour) is one of the salivary gland tumour affecting both Major and minor salivary glands and accounts for 40-70% of all tumours [1], palate is the most common site of the minor salivary glands [2]. Other sites include the lip, buccal mucosa, floor of the mouth, tongue [3], tonsil, pharynx, uvula [4], retro molar area, and gingiva and also in external auditory meatus [5]. It is usually seen in fourth, fifth and sixth decades of life more predilections for females. The size of the tumour varies from small peanut to large apple size in minor glands. Surface of the mucosa is normal in most of the cases but if the size is large it can show ulcerations and papillary growth making it difficult to diagnose. In this paper we have described the management of series of cases of pleomorphic adenoma.

CASE REPORT 1

A 50 year old female patient came with a complaint of painless swelling in the upper left palatal region for the past 5years. On examination, a single swelling measuring 2.5 × 2 cms (Fig.1) in diameter was found at

the junction of hard & soft palate on left side. The swelling was asymptomatic, slow growing, firm, with smooth surface & no radiographic evidence of bone involvement was seen. Clinical differential diagnosis was a benign salivary gland tumour, possibly pleomorphic adenoma, neuroma and neurofibroma.

After routine preoperative investigations, the case was planned for surgical excision. Under local anaesthesia excision of the mass was carried out including the overlying mucosa with 1 cm margin at the periphery (Fig.2). A tincture Benzoin gauge was then placed over the defect and sutured to the wound margins. The pack was removed after 2 weeks and postoperative healing was uneventful (Fig.3). Histopathological report confirmed the lesion to be "Pleomorphic Adenoma" (fig.4).

Fig-1: **clinical presentation of the lesion preoperatively**

Fig-2: **2 days After Resection showing granulating wound**

Fig-3: **6 month's post-op view**

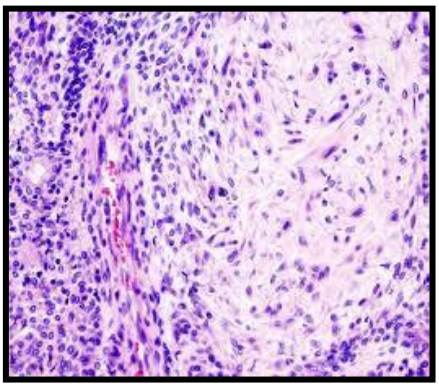


Fig-4: **Histopathologic presentation**

CASE REPORT 2

A 72 years old male patient came with a chief complaint of a palatal swelling since 2 years. Examination revealed an asymptomatic, single, non-tender and approximately 2 x 2 cm sized swelling along the right side of palate adjacent to 15-17 teeth region. It had smooth mucosal surface without any discoloration and had firm consistency. (fig.5) the case was provisionally diagnosed as pleomorphic adenoma.

Fig-5: pre-op clinical presentation of swelling

After routine pre-op investigations and FNAC the lesion was planned for surgical excision. The lesion was excised under local anesthesia followed by reconstruction of the defect with the buccal fat pad further covered by a palatal acrylic plate to provide additional cover to the surgical site and prevent hematoma collection beneath the BFP (fig. 6-9). The healing was evidently uneventful (fig 10) until last follow up. The histopathology report revealed pleomorphic adenoma.

Fig-6: excision of lesion

Fig-7: excised lesion

Fig-8: reconstruction of defect with buccal pad of fat

Fig-9: acrylic plate in place following the reconstruction.

Fig-10: follow up

CASE REPORT 3

A 40 years old female patient came with a chief complaint of a palatal swelling since 4 years. Examination revealed an asymptomatic, single, non-tender and approximately 5 x 3 cms sized swelling along the centre of the palate extending anterio-posteriorly from 1 cm posterior to the central incisors

upto the 2nd molar region covering the entire width of the palate. It had smooth mucosal surface, no discoloration and had firm consistency. CT scan revealed pressure resorption of the palate along the midline (fig. 11-12). The case was provisionally diagnosed as pleomorphic adenoma.

Fig-11: clinical presentation of swelling

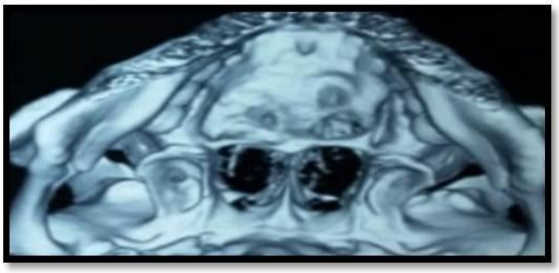


Fig-12: 3D CT-scan

After routine pre-op investigations the lesion was planned for surgical excision. The lesion was excised along with the overlying mucosa under local anesthesia followed by reconstruction of the defect with the buccal pad of fat (fig. 13-15). The histopathology report confirmed the presence of pleomorphic adenoma. The patient was followed up regularly and healing was satisfactory.

Fig-13: surgical excision

Fig-14: excised lesion

Fig-15: reconstruction of the defect with BFP

CASE REPORT 4:

A 45-year-old female patient reported with a painless growth on the palatal surface of the mouth since 20 years. The patient noticed the growth around 20 years back, which started as a small growth, gradually increased in size over a period of last 1 year and attained the present size of 1.5 × 1.5 cm between the first and second molar regions on the palatal side. (Fig 16). It was associated with burning on consuming sweet and hot food stuff. A solitary, well-defined, pediculated cauliflower like exophytic growth was present. It was non-tender, firm in consistency and arose from the underlying soft tissue.

Incisional biopsy was taken to confirm diagnosis. The reports revealed squamous cell papilloma. (Fig 17). The lesion was then excised completely and again sent for histo-pathological examination. The report then showed histologic characteristic of squamous cell carcinoma.Re-evaluation of slides and examination for IHC markers namely P53, S-100, pancytokeratin and GFAP were carried out to rule out carcinoma. The final report confirmed that of keratinizing variant of pleomorphic adenoma. The patient is followed up for 2years and there is no problem.

Fig- 16: clinical presentation of lesion

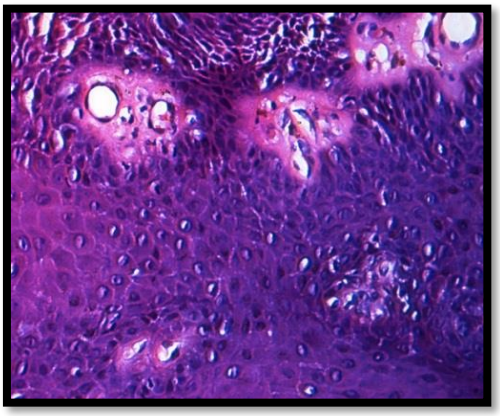
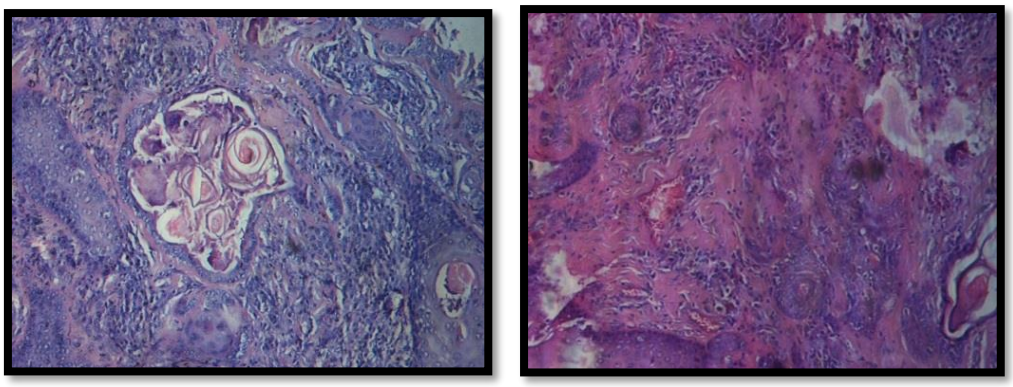


Fig-17: histopathological presentation

Fig-18: following excision of lesion

Fig-19: excised lesion

Fig-20: follow up



Fig–21: IH and re-evaluation of histological examination of excised lesion

DISCUSSION

Pleomorphic adenomas are derived from a mixture of ductal and myoepithelial elements [6]. It commonly seen benign tumor of salivary glands affecting 84% of parotid gland followed by submandibular gland in 8% of cases and in 4-8% of cases it is seen in minor salivary glands. Palate is the most common site of occurrence followed by lips, floor of the mouth, tongue, nasophyaranx etc.

Females are more affected than males 2:1. Occur in the 4th and 5th decade of life, but may arise at any age. Pleomorphic adenoma is the most common benign tumour of the minor salivary glands. The most common site of this tumour is the palatal area (approx 73%) [1,7] following is the upper lip (17%) [8], buccal mucosa , floor of the mouth, tongue tonsil, pharynx, and retromolar area. Review of literature shows few cases reported of the pleomorphic adenoma arise in the parapharyngyal space.in our case series also its commonly seen in females and palate is the most affected site. In all the cases it is seen in above fifth decade of life.

It arises in the oral cavity as a painless, slowly growing, firm swelling, commonly seen on the posterior lateral aspect of the palate, presenting as a smooth, dome shaped mass [9]. Because of tightly bound nature of the hard palate mucosa, it appears to be fixed. While in cases of lips and buccal mucosa, it is freely movable. Pleomorphic adenoma of palate is seldom allowed to attain a size greater than 1-2 cm in diameter, because it causes the patient difficulty in mastication, talking, & swallowing, it is detected & treated earlier than tumours of major salivary glands [1]. We had one case where the tumor size was larger than 2cm , and in one case the lesion surface showed cauliflower like growth, such type of cases are difficult to diagnose. If the overlying mucosa is ulcerated and ulceration is not due to any trauma or biopsy, malignancy should be suspected. In such cases incisional biopsy and immunohistochemistry should be done prior to the excision of the lesion. If the lesion the large or longstanding C.T. scan can be the important diagnostic tool of these tumours [10]; it helps to determine the extension of the lesion, it doesn't invade bone but may lead to a cupped out resorption of bone due to pressure effect. The potential risk of the pleomorphic adenoma becoming malignant is about 7% [11-14]. Malignant tumor arising from this tumor is a phenomenon know as carcinoma ex pleomorphic adenoma. Slow growth over multi-years history 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.

Histopathologically it is an epithelial tumour, of complex morphology possessing epithelial and myoepithelial elements arranged in varieties of patterns and embedded in muco- polysaccharides stroma. Formation of the capsule is a result of fibrosis of the surrounding salivary parenchyma which is composed by the tumour and is referred to as false capsule [2].

Tumours of hard palate are usually excised down to the periosteum, including the overlying mucosa with 1cm clinical margins at the periphery [3]. Excision of palatal bone is not required as periosteum is effective anatomical barrier. If the tumour extends to soft palate, the excision includes the fascia over muscles of soft palate. In our series one case had cuffing effect on palatal bone and one case tumor was extended to soft

palate. They did not show any recurrence. After the excision of the lesion the surgical area can be covered with medicated gauze pack or various grafts like skin, mucosa, collagen membrane. In our case we used buccal fat pad to cover the area and it showed good healing and less discomfort to the patent.

Pleomorphic adenoma generally does not recur after adequate surgical excision. Reasons for recurrence include incomplete excision, seeding, cutting through the microscopic extra capsular projections thereby leaving some tumour behind, or rupture of the capsule and accidental seeding of tumour cells, as is more likely to occur when dissecting close to the capsule [6].

CONCLUSION

Pleomorphic adenoma, though a common entity, is still a challenging tumor for pathologist, radiologist, and the surgeon. Its diverse histological and topographical characteristic makes the tumor special. Collaboration between clinician and pathologist is absolutely essential to deliver suitable treatment to the patient and avoid undesirable consequences. Our patient has been followed up for 1 year, has excellent healing with no complaints & no signs of recurrence.

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