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CASE REPORT

Myoepithelial Cell Predominant Pleomorphic Adenoma of a Minor Salivary Gland- A Case Report

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ABSTRACT:
Salivary gland tumors account for less than 3% of the head and neck tumors. They are more common in adults than in children. The salivary glands may present with a diverse range of lesions presenting a challenge to even the most experienced clinician and pathologist. The purpose of this article is to report a case of pleomorphic adenoma of minor salivary gland in a 28 year old female patient which was plasmacytoid myoepithelial cell predominant type and is a uncommon variant. The main aim of this article is to familiarize the clinicians and budding pathologists with this rare variant.
Key words: adenoma, myoepithelial cell, plasmacytoid, soft palate, minor salivary gland.

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INTRODUCTION:
Tumours of the salivary glands constitute an important area in the field of oral and maxillofacial pathology and constitute about less than 3% of all head and neck tumours.[1] The annual incidence of salivary gland tumors around the world ranges from about 1.0 to 6.5 cases per 100,000 populations. The most common site for salivary gland tumors is the parotid gland, accounting for 64% to 80% of all cases and in that most of the tumors are benign in nature. The fortunate part is very less percentage of this tumor will turn into malignancy, which ranges from 15% to 32%.[2]
Tumors of minor salivary glands make up 9% to 23% of all tumors. Pleomorphic adenoma is the most common in the minor salivary glands. (allen). Hiostopathologically pleomorphic adenoma has a characteristic features with no difficulty in diagnosis showing combinations of glandular epithelium and mesenchymal tissue in the variable proportions. The epithelial components are in the form of ducts, cellular nests, sheets of cell with anastomosing cords with myxoid, chondroid and osseous areas. Occasionally it shows variable and diverse histological variant with predominantly or almost entirely composed of myoepithelial cells without ductal elements and minimal stromal components.[3, 4]
So as the result of above mentioned features it is the main reason for diagnostic dilemma often encountered in interpreting myoepithelioma, not only in differentiating benign from malignant cases but also in the specific classification of these neoplasms. The sensitivity and specificity of the cytologic diagnosis of Pleomorphic adenoma is around 93 and 98%, respectively.[5,6] Variations in the cytological picture of pleomorphic adenomas are relatively common and can result in diagnostic errors. [6] In this report we are presenting a rare variant of pleomorphic adenoma i.e., myoepithelial cell

predominant which is a challenging task for a budding pathologist to diagnose.

CASE REPORT

A 28-year-old female patient reported to a private clinic with a chief complaint of difficulty in swallowing due to swelling in the palate since 2 months. Swelling was insidious in onset and gradually increased in size. It was associated with localized pain while swallowing.

On intra-oral examination, a well circumscribed, firm swelling was noted over the palate on the left side near the greater palatine foramen of size 1cm x 1cm (fig-1). On palpation, slight pain was elicited. Based on the history and clinical features a provisional diagnosis of benign salivary gland tumor was given.

The lesion was surgically excised by reflecting the mucoperiosteum along with palatal flap (fig-2), leading to a bony depression of 1cm. The specimen was totally enucleated and sent to Department of Oral Pathology, Yenepoya Dental College, Yenepoya University, Deralakatte, Mangalore for histopathological examination.

On gross examination the excised specimen was well circumscribed, encapsulated, firm in consistency, greyish white in color and measured 1.2x1.2cm in size (fig-3). The entire tissue was subjected to routine tissue processing. The paraffin embedded sections of 4 µm thick were cut and stained with hematoxylin and eosin.

The histopathological examination revealed well circumscribed encapsulated (fig-4) highly cellular lesional tissue showing glandular epithelium and mesenchyme like tissue. The section showed more of cellular content with very minimal stroma. The epithelial components forms ducts (fig-5) and sheets of rounded myoepithelial cells appearing as angular or spindled, while numerous cells are more rounded with eccentric nuclei and hyalinized eosinophilic cytoplasm resembling plasma cells. These cells were referred to as plasmacytoid myoepithelial cells (fig-6). Very few areas in the given section showed foci of myxoid changes along with hyalinization.

Figure 1: A well circumscribed, firm swelling over the left side of palate near the greater palatine foramen of size 1cm x 1cm

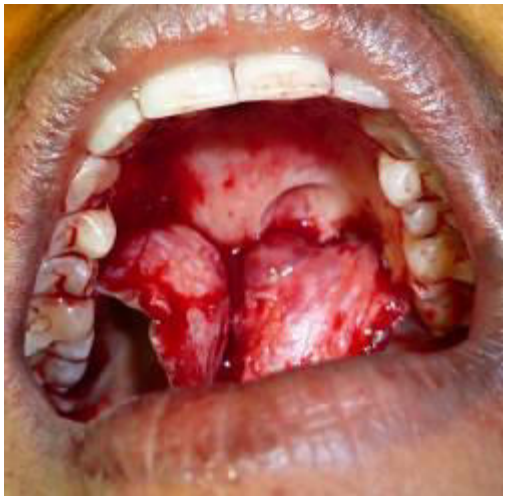

Figure 2: surgical procedure showing reflected mucoperiosteum along with palatal flap. Note the bony defect in the above picture.

Figure 3: excised gross specimen showing well circumscribed, encapsulated tissue specimen and measuring 1.2x1.2 cm in size

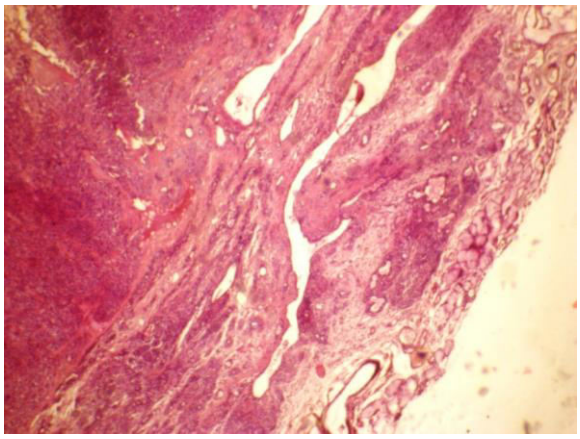

Figure 4: (H and E , 4x), Photomicrograph of the low power view of lesional tissue showing well circumscribed encapsulated highly cellular tissue with showing glandular epithelium

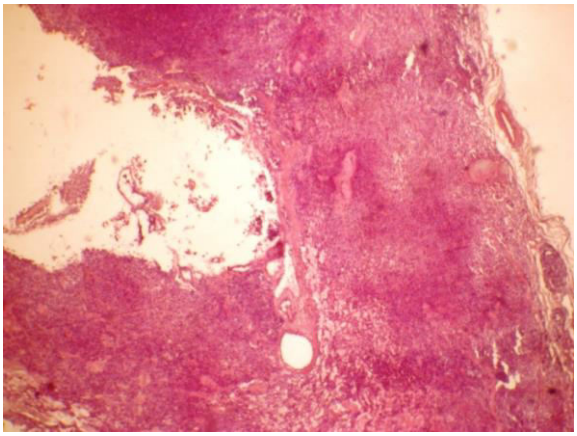

Figure 5: (H and E , 4x), Photomicrograph of encapsulated lesional tissue showing glandular epithelium, predominantly cellular content with few duct like spaces

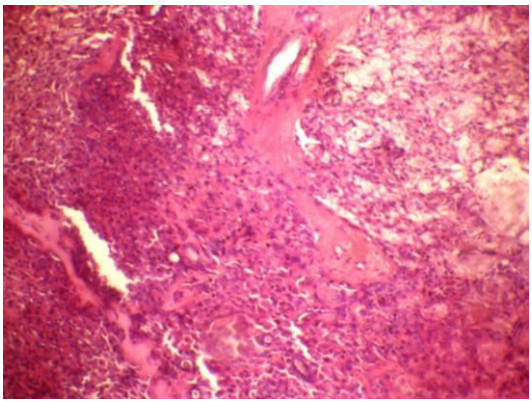

Figure 6: (H and E , 10x), Photomicrograph showing myoepithelial cells appearing as angular or spindled, with more rounded with eccentric nuclei and hyalinized eosinophilic cytoplasm resembling plasma cells

DISCUSSION `

Pleomorphic adenomas are the most common benign salivary gland neoplasms which accounts for 60-70% of all parotid neoplasias, 40-60% of all submandibular gland neoplasias and 40-70% of all minor salivary gland neoplasias. [7]

Pleomorphic adenomas most commonly occur between the age of 30-60 years of life with mean age of occurrence is 36.3 years. [7] The tumors are found to be seen affecting females more than males with the male : female ratio ranging from 1:1.4 to 1:1.7. [8, 9] These tumor involving minor salivary glands are painless and slow growing ones. [10] However sometimes the growth rate could be fast. [11] The pattern of growth is indolent in nature. [12] Sometimes minor salivary gland tumor clinically presents as a smooth surfaced, dome shaped submucosal nodule. The consistency of lesion felt on palpation depends upon the nature and amount of stromal component in the lesional tumor. So, it ranges from soft in the case of more mucinous tumor to hard in tumors with extensive chondroid to collagenous content.[9] Rapid increase in size of the mass should lead to suspicion of intra lesional bleed / malignant transformation and should be dealt with caution. [11]

Although pleomorphic adenoma exhibits classic histopathological picture, at times it can be myoepithelial component predominant. Neoplastic cells with myoepithelial differentiation are often present in both benign and malignant salivary glands tumors. Myoepithelial cells when present, can present with variable cytomorphological anatomy in the form of 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. However, in cellular pleomorphic adenomas, there is an abundance of the epithelial or myoepithelial cells with minimal interfering stroma present. Myoepithelioma, which is composed almost exclusively of myoepithelial cells, is distinguished from pleomorphic adenoma on the basis of the relative lack of duct like structures and chondromyxoid stroma.[13] Myoepithelioma is, however, an uncommon benign tumor, which accounts for only 1.5% of all tumors in the major and minor salivary glands. Its malignant counterpart, myoepithelial carcinoma or malignant myoepithelioma, is even rarer and is mainly distinguished from myoepithelioma on histological grounds based on the presence of necrosis and infiltrative growth. [13]

These tumours are encapsulated and therefore complete removal should be ensured for the proper cure. The treatment of choice for pleomorphic adenomas are total surgical excision.[14-16]

CONCLUSION

Pleomorphic adenoma has to be considered as one of the clinical differential diagnosis for palatal swellings and the lesion must be subjected to histopathological examination to confirm the diagnosis. Pathologists should be aware of rare histological presentations so as to give an accurate diagnosis. Pleomorphic adenoma generally does not recur after adequate surgical excision. However possibility of recurrence due to the implantation of tumor cells as a consequence of rupturing of the capsule or islands of tumor tissue left behind as a result of surgery, need to be kept in mind and long term follow up of the patients is mandatory.

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