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Pleomorphic Adenoma of the Parapharyngeal Space: A Common Tumour at an Uncommon Site.

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Case Report

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ABSTRACT

Tumours arising in parapharyngeal space accounts for less than 1% of all head and neck tumours. Though pleomorphic adenoma (PA) is the most common benign minor salivary gland tumour but it is a rare occurrence in parapharyngeal space. Here we present a case of pleomorphic adenoma arising in parapharyngeal space in a 70 year old man who presented with a painless slow growing intra-oral swelling and dysphagia since 6 months.Computed tomography (CT) examination revealed an ill defined soft tissue density mass of size 46 mm at right infra temporal fossa. Fine needle aspiration cytology (FNAC) was suggestive of PA. The entire tumor mass was excised along with overlying mucosa. Histopathological examination confirmed diagnosis of PA of minor salivary gland. There has been no recurrence of the lesion since 6 months.

INTRODUCTION

Pleomorphic adenoma amounts to 40-70% of minor salivary gland tumours, the large majority of cases being located in the palate, lips and buccal mucosa. Pleomorphic adenoma arising in the parapharyngeal space is very rare [1]. Here we report a case of Pleomorphic adenoma arising in the parapharyngeal space and review the literature.

Case Report

A 70-year-old male presented with a slow growing painless swelling inside the oral cavityof six months duration. He had no complaints of airway obstruction except for mild discomfort during swallowing. General physical examination revealed a well oriented and moderately built individual with no signs of any systemic illness. The clinical examination revealed a firm 5cm diameter mass arising from posterior pharyngeal wall occupying oropharynx and extending into nasopharynx. The swelling was impinging against soft palate. [Figure 1]. The mass had a smooth surface and overlying mucosa was stretched. CT imaging of paranasal sinuses revealed an ill defined soft tissue density mass of size 46 mm at right infra temporal fossa, with widening of pterygoid plates, indenting the right lateral wall of oro and nasopharynx[Figure 2]. FNAC was performed, which was suggestive of PA. After investigating the patient for fitness for surgery and ensuring that there are no other lesions, he was taken up for surgery. The tumour was approached by splitting the soft palate and found to be well encapsulated. The tumour was enucleated and pharyngeal wall and palate were sutured back. The excised mass was 4X3X2 cms circumscribed firm mass and on cut section showed an encapsulated grey white growth [Figure 3a & 3b]. Histopathological examination,

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revealed a circumscribed tumour showing biphasic population of epithelial and mesenchymal cells arranged in sheets [Figure 4]. and duct-like pattern[Figure 5].The tumour cells are round to oval with moderate amount of eosinophilic cytoplasm with round to oval vesicular nucleus.There areas of squamous metaplasia. There are areas of clear cell change[Figure 6], hyalinisation and myxoidareas.The final histopathology report confirmed the diagnosis as pleomorphic adenoma. The patient's postoperative course was uneventful. The healing was satisfactory. No recurrence was observed after a follow-up period of 8 months [Figure 7].

Figure 1: Clinical photograph showing an intra oral swelling impinging the soft palate(black arrow) measuring about 3X3 cms.

Figure 2: CT image of paranasal sinuses showing an ill-defined soft tissue density mass (black arrow) at right infra temporal fossa, indenting the right lateral wall of oro and nasopharynx.

Figure 3a: Gross photograph showing the excised mass measuring 4x3x2 cms, circumscribed andfirm in consistency.
Figure 3b: Cut section of the mass showed an encapsulated grey white growth.

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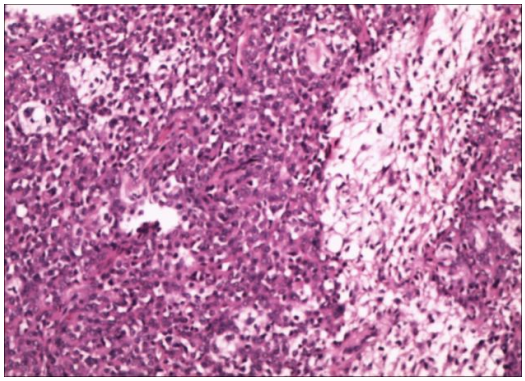

Figure 4: Photomicrograph showing tumour exhibiting biphasic population of epithelial and mesenchymal component. (H&E; 100X).

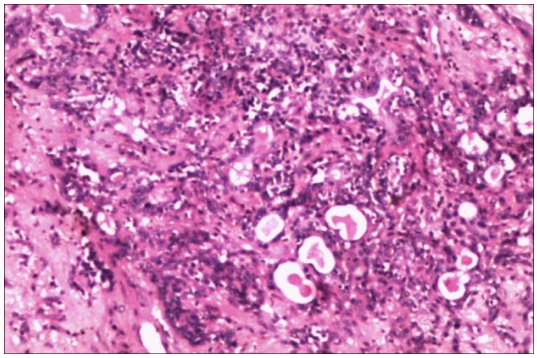

Figure 5: Photomicrograph showing tumour cells arranged in duct like pattern. (H&E; 100X).

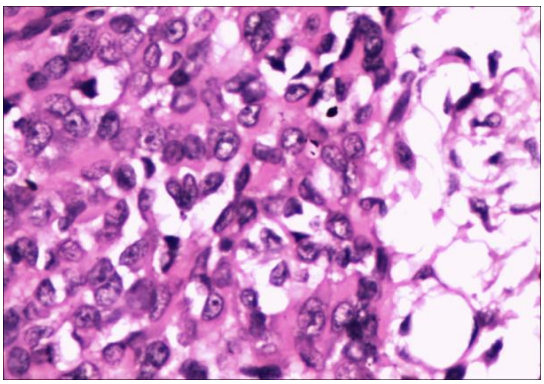

Figure 6: Photomicrograph showing round to oval tumour cells with moderate amount of eosinophilic cytoplasm with round to oval vesicular nucleus and also showing clear cell change.(H&E; 400X)

Figure 7: Photograph showing completely healed lesion after 8 months without any recurrence.

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DISCUSSION

22% of all salivary gland tumours account for minor salivary gland tumours. Only 18% of minor salivary gland tumours are benign [2]. The most common site of pleomorphic adenoma of the minor salivary gland is the palate followed by lip, buccalmucosa, floor of mouth, tongue, tonsil, pharynx, retromolar area, and nasal cavity [3].

Tumours arising from the parapharyngeal space are rare accounting for only 0.5% of head and neck tumours.80% are benign and and 40-50% arising from salivary glands, Pleomorphic adenoma being the most common. Very few case reports have been described in literarure that pleomorphic adenoma arise de novo in the parapharyngeal space. Pleomorphic adenoma arising primarily in parapharyngeal space may probably occur due to displaced or aberrant salivary gland tissue within a lymph node. They are often large at the time of presentation as they may be asymptomatic or misdiagnosed when being small [4].

CT scan is an important diagnostic tool in tumours of parapharyngeal space because it helps in determining the extent of disease and local spread [2].

Histopathological examination shows typical mixed tumor having a biphasic appearance resulting from the intimate admixture of epithelial and stromal components. Most of the epithelial component is of a glandular nature, but foci of squamous metaplasia are common. The stroma may have a nonspecific fibromyxoid appearance, sometimes containing abundant elastic tissue or extensive adipose tissue [5].

Surgery is the only present treatment modality for pleomorphic adenoma. Approximately 6% of patients with benign minor salivary gland tumours showed recurrence in a study conducted by Spiro.[6] To prevent local recurrence resection of the tumour with an adequate margin of grossly normal surrounding tissue is of utmost importance. Wide surgical resection margins may not be possible when tumors arising from parapharyngeal space due to proximity of vital structures [2]. In our present case after 8 months of follow up the patient did not present with any recurrence.

CONCLUSION

Pleomorphic adenoma arisingin the parapharyngeal space is rare. These tumours are known for recurrences and have potential to turn malignant especially when involving minor salivary glands. High index of suspicion with wide local exicision and definite histopathological diagnosis with regular follow ups are essential especially when these tumours arise in surgically inaccessible sites.

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