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Research Paper

Medical Science

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myoepithelioma of the parotid gland-rare tumor

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ABSTRACT

Myoepitheliomas account for less than 1.5% of all salivary gland tumors. On H & E it shows well encapsulated tumor comprising of tumor cells arranged in sheets and small clusters. Three major types have been identified: spindle cell, hyaline (plasmacytoid) and clear cell. S-100 shows diffuse positivity confirming myoepithelial origin of the cells. According to some authors all myoepitheliomas of clear cell type should be regarded as potentially malignant.

INTRODUCTION

Myoepitheliomas account for less than 1.5% of all salivary gland tumors[1,2,3,4]. The most common location of myoepithelioma of the head and neck region are the parotid gland (40%) and the palate(21%).[5]

CASE HISTORY

50 year old male, non-smoker presented with a swelling in the left parotid region since 2 years. The swelling was painless, gradually increased in size and showed no external signs of inflammation.

The right side showed no similar swelling. No cervical lymphadenopathy present.CYTOLOGIC FINDINGS

FNAC done from the left sided parotid swelling shows highly cellular smears comprising of cells arranged in sheets and small clusters. Individual cells are round, oval, spindle and plasmacytoid against a background of scanty stroma. Diagnosis-cellular pleomorphic adenoma .

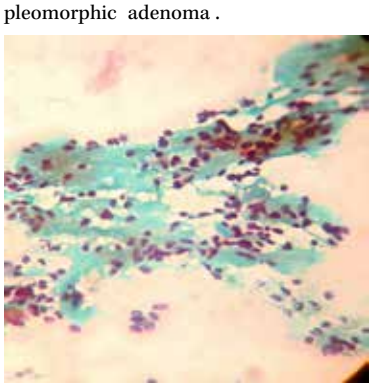

Fig 1: Sheets of cells

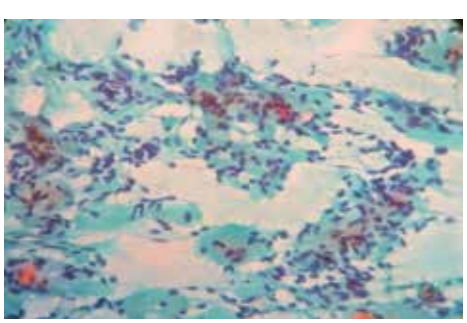

Fig 2: Round, oval and spindle cells

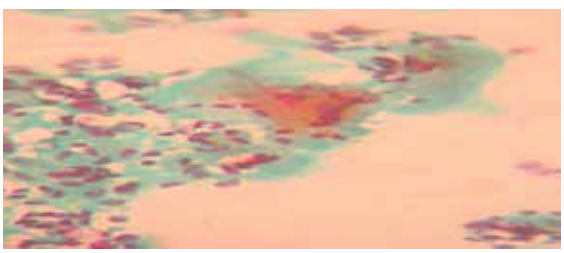

Fig 3: Sheets of cells along with scanty stroma

GROSS EXAMINATION

A single globular mass measuring 4x2.5x2 cms. External surface is well encapsulated. Cut surface shows solid and cystic areas with areas of hemorrhage

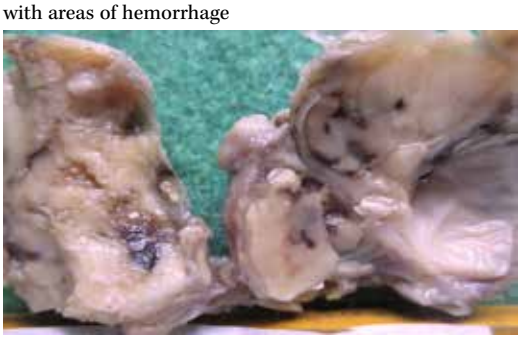

Fig 4: Solid, cystic and few hemorrhagic areas

MICROSCOPIC FEATURES

H & E stained sections studied show well encapsulated tumor comprising of tumor cells arranged in sheets and small clusters. Individual cells are spindle , plasmacytoid and clear. No necrosis or mitosis seen.

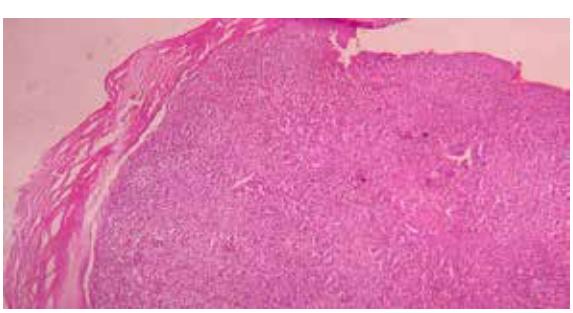

Fig 5: Encapsulated tumor with sheets of cells

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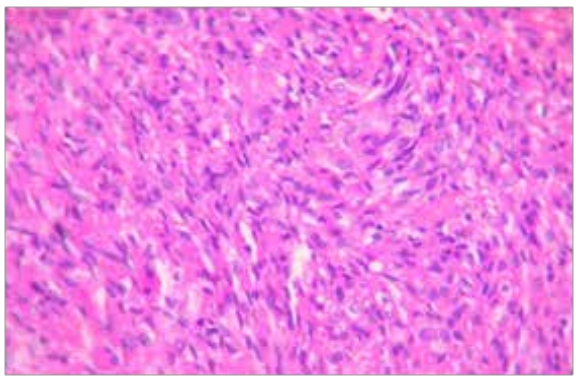

Fig 6: Mainly spindle cells

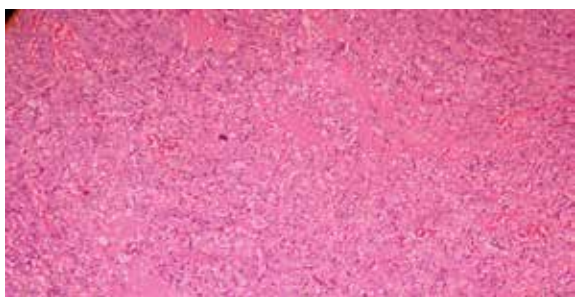

Fig 7: Plasmacytoid cells with hyaline material

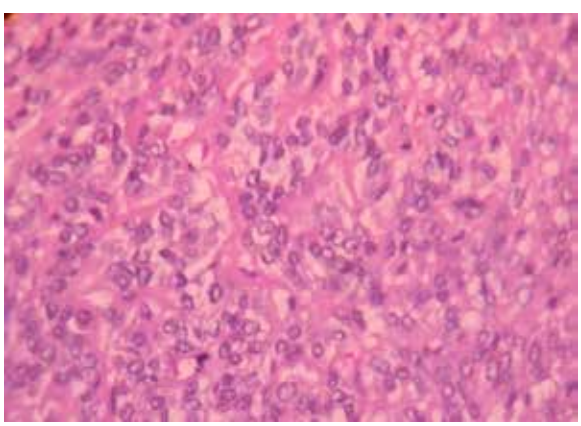

Fig 8: Mainly clear cells

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S-100 shows diffuse positivity confirming myoepithelial origin of the cells. Diagnosis of myoepithelioma of the salivary gland was given.

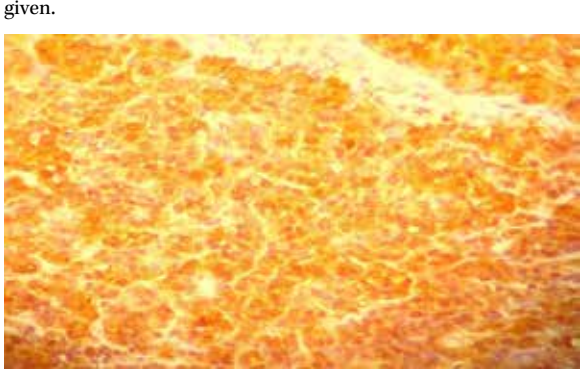

Fig 9: S-100 shows diffuse positivity

DISCUSSION

Myoepitheliomas account for fewer than 1.5% of all salivary gland tumors. The most common location[6]. The tumor appears to be rare, and this contrast with the active role of myoepithelial cells in the histogenesis of several type of salivary gland tumors. The number of case reports is increasing as pathologists have become more aware of its existence. The most common location of myoepithelioma of the head and neck are the parotid gland (40%) and the palate (21%) (7) . The age and sex distribution of myoepitheliomas is similar to that of mixed tumors. There are no distinctive clinical features and, similar to most other salivary gland tumors, myoepitheliomas present as asymptomatic, slowly growing masses. Fine needle aspiration cytology might not give accurate results as seen in our case. Grossly, myoepitheliomas have a solid, tan or yellow–tan glistening cut surface. Parotid myoepitheliomas are usually encapsulated, whereas those arising in the minor salivary glands may not demonstrate a capsule.

Microscopically, myoepithelial cells are a component of most types of benign and malignant salivary gland tumors, particularly benign mixed tumor, adenoid cystic carcinoma and terminal duct carcinoma. Tumors composed exclusively of myoepithelial cells are generically termed as myoepitheliomas. Three major types have been identified: spindle cell, hyaline (plasmacytoid) and clear cell. Combined and intermediate forms also exist . Most reported cases of spindle cell and clear cell myoepitheliomas have occurred in the parotid gland, whereas most pure examples of hyaline myoepitheliomas have been described in the minor salivary gland, especially the palate. According to some authors all myoepitheliomas of clear cell type should be regarded as potentially malignant.

With immunocytochemical techniques, myoepithelial cells stain positive for cytokeratin, muscle-specific actin, occasionally express S100 protein and glial fibrillary acidic protein (GFAP). Desmin has not been demonstrated. The neoplastic myoepithelial cells consistently demonstrate cytocheratin, S100 and muscle-specific actin immunoreactivity, whereas the immunoreactivity for vimentin and GFAP is more variable.

Myoepithelial carcinoma, known as malignant myoepithelioma, is the malignant counterpart of myoepithelioma. Malignant myopithelioma has been added to the second edition of the World Health Organization's histological classification of salivary gland tumor(8).The majority of myoepithelial carcinoma develop in a pleomorphic adenoma.

CONCLUSION

Myoepithelioma occurs in most major and minor salivary gland tissues, and it is generally a biologically benign lesion. By means of this case report, we have attempted to scrutinize this entity. The variability of the histopathologic structure of mixed tumors and the alteration of the histochemical characteristics of myoepithelial cells in tumors from those of normal glands made identification of tumor myoepithelial cells difficult and uncertain. Also, the clear cell variant has been regarded as potentially malignant by many.

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