

**Case Report****Epithelioid Variant of Myoepithelioma of Parotid Gland: A Case Report**Pradeepanand Vaidya<sup>1</sup>, Amar<sup>2</sup>, Sathyamoorthy Aithal<sup>3</sup>, Kuladeepa Ananda Vaidya<sup>4\*</sup>, Sukesh<sup>5</sup><sup>1</sup>Senior Resident, Department of Gen. Surgery, Srinivas Institute of medical science and research centre, Mukka, Mangalore-575021, Karnataka, India<sup>2</sup>Assistant Professor, Department of Gen. Surgery, Srinivas Institute of medical science and research centre, Mukka, Mangalore-575021, Karnataka, India<sup>3</sup>Professor and HOD, Department of Gen. Surgery, Srinivas Institute of medical science and research centre, Mukka, Mangalore-575021, Karnataka, India<sup>4</sup>Assistant Professor, Department of Pathology, Srinivas Institute of medical science and research centre, Mukka, Mangalore-575021, Karnataka, India<sup>5</sup>Professor and HOD, Department of Pathology, Srinivas Institute of medical science and research centre, Mukka, Mangalore-575021, Karnataka, India**\*Corresponding author**

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**Abstract:** Myoepithelioma is a benign neoplasm of salivary glands, which represents 1.5 % of all salivary gland neoplasm. This may arise from the minor or major salivary glands. Histopathologically this is a benign tumour composed almost exclusively of sheets, islands or cords of cells with myoepithelial differentiation that may exhibit spindle, plasmacytoid, epithelioid or clear cytoplasmic features. A middle aged female came with a history of slow growing mass on the left side of her face. Clinical evaluation and radiological assessment showed that the lesion was originating from parotid gland. Total parotidectomy was performed and histopathologically confirmed as an epithelioid variant of myoepithelioma of parotid gland. We are presenting this case because of its rarity and its clinical simulation with various other common salivary gland tumours, with the objective of contributing to better understanding of this tumour.**Keywords:** Myoepithelioma, Salivary gland, Tumour, Parotidectomy.

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**INTRODUCTION**

Myoepitheliomas of salivary glands are extremely rare entity, comprising approximately only 1–1.5% of all salivary gland tumours [1]. It was first described by Sheldon WH *et al.*, in 1943 and considered as a variant of pleomorphic adenoma [2]. Initial diagnostic criteria for benign myoepithelioma were based on the review of Barnes *et al.* [3], Sciubba and Brannon [4].

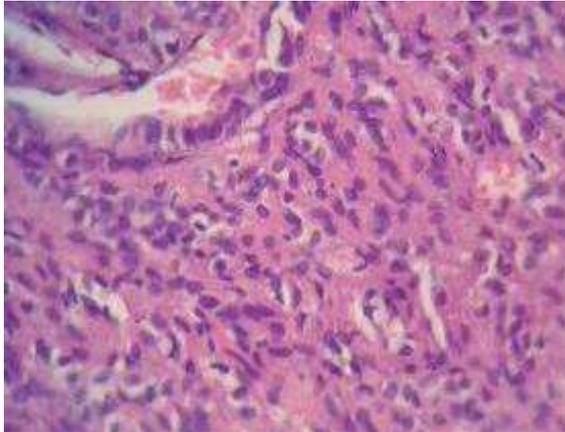
**CASE REPORT**

A female, aged 55year old presented with history of slow growing mass situated at the angle of left jaw, just in front of the ear lobule. The mass was present since 10 years and was asymptomatic but recent onset of mild discomfort over the mass made her to visit the surgery OPD. Physical examination revealed a mobile, round, firm palpable mass seated in the parotid region. Mass was non tender and no pathological change in the overlying skin or no evidence of cervical lymphadenopathy. Neurologic evaluation of the sensory and motor function of the oral and maxillofacial region was within normal limits. Ultrasonography showed an homogenous hyper echoic soft tissue mass

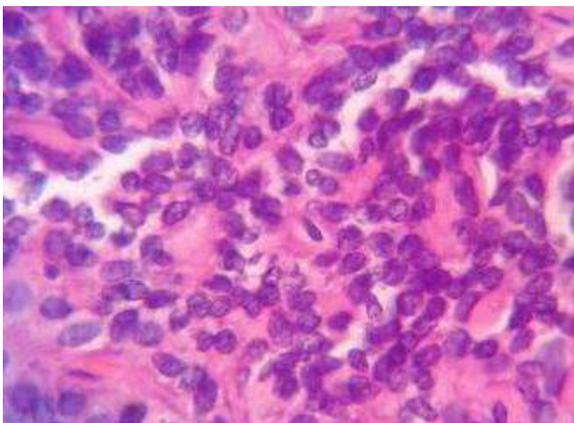
measuring 4x4cm arising from parotid gland, partly involving both superficial and deep lobes of left parotid gland. Fine needle aspiration cytology (FNAC) was performed, which yielded scanty grey white material composed of epithelial and myoepithelial cell clusters admixed with fragments of fibromyxoid stromal material. Cytological diagnosis of benign tumour of parotid gland, possibly pleomorphic adenoma was rendered. Total parotidectomy was performed under general anaesthesia and the specimen was sent in 10% formalin for histopathological examination. On gross examination, a well circumscribed, unencapsulated, globular greyish yellow mass (m/s 4x3x3cm) seen. External surface was nodular and cut section of the mass showed a circumscribed nodular, grey yellow-tan lesion m/s 2.5x2x1.5cm, compressing the normal salivary gland to one side.

Microscopic sections from the lesional tissue showed a well circumscribed tumour adjacent to salivary gland tissue, composed of monomorphous tumour cells arranged in sheets, islands, cords and trabecular pattern embedded in a fibrocollagenous stroma with focal

hyalinized material and traversed by few fine blood vessels. Epithelioid tumour cells were with moderate eosinophilic cytoplasm and bland round to ovoid nucleus having inconspicuous nucleoli. No evidence of cellular atypia, abnormal mitosis or necrosis (Fig. 1, 2). Based on these microscopic findings, a final diagnosis of epithelioid variant of myoepithelioma of parotid gland was made. After the surgery, a follow-up of six months showed no signs and symptoms of recurrence.



**Fig. 1: Epithelioid tumour cells arranged in cords and trabecular pattern embedded in a fibrocollagenous stroma with focal hyalinized material and traversed by few fine blood vessels.**



**Fig. 2: Tumor cells are with moderate eosinophilic cytoplasm and bland round to ovoid nucleus having inconspicuous nucleoli.**

## DISCUSSION

The most common location of myoepithelioma of the head and neck are the parotid gland (40%) and the palate (21%). The age and sex distribution of myoepitheliomas is similar to that of mixed tumours [1]. Their highest frequency is observed in the third decade of life [5]. Similar to most other salivary gland tumors, myoepitheliomas present as asymptomatic, slowly growing masses [1].

Fine needle aspiration cytology is a baseline investigative tool in the assessment of any salivary gland swellings. Whilst it is a useful method of

distinguishing neoplastic from nonneoplastic lesions it may not be possible to always accurately predict a specific tumour type due to the overlapping spectrum of cytological appearances found in a wide variety of salivary gland neoplasms. In our case FNAC of the lesion was performed and misdiagnosed as pleomorphic adenoma due to some overlapping cytological features of myoepithelioma with mixed tumour of parotid gland [6].

Myoepithelioma is a benign salivary gland tumour composed almost exclusively of sheets, islands or cords of cells with myoepithelial differentiation that may exhibit spindle, plasmacytoid, epithelioid or clear cytoplasmic features [7].

The precise criteria for inclusion of a tumour in this category still remain controversial. The complex and varied morphologic and immunophenotypic expressions of neoplastic myoepithelium have always attracted numerous investigators, with valuable, but often contradictory, data being presented [8].

Grossly myoepitheliomas are well-circumscribed, solid tumours that usually measure less than 3 cm in diameter, having a solid, tan or yellow-tan, and glistening cut surface [7].

Microscopically a variety of cell morphologies has been recognized, including spindle, plasmacytoid or hyaline, epithelioid, and clear. Most are composed of a single cell type but combinations may occur. Spindle cells are arranged in interlacing fascicles with stroma-like appearance. Plasmacytoid cells are polygonal cells with eccentric nuclei and dense, nongranular or hyaline, abundant eosinophilic cytoplasm. Epithelioid cells are arranged in nests or cords of round to polygonal cells, with centrally located nuclei and a variable amount of eosinophilic cytoplasm. In our case microscopically cells are epithelioid in shape, arranged in sheets, cords and trabecular pattern embedded in a fibrocollagenous stroma with focal hyalinized material [7].

The major differential diagnosis of myoepithelioma is pleomorphic adenoma. Myoepitheliomas are composed completely, or almost completely, of myoepithelial cells, whereas the amount is variable in the pleomorphic adenoma. [8]. Distinction from pleomorphic adenoma is based on the relative lack of ducts and the absence of myxochondroid or chondroid areas [7]. Myoepithelioma probably constitutes one end of a biological spectrum which also includes pleomorphic adenoma and some (non-membranous) basal cell adenomas [9]. The cells of myoepithelioma are usually positive for cytokeratins (CK7 and 14). The reactivity of the spindle cells is variable for smooth muscle actin, muscle specific actin (MSA), calponin, S-100, GFAP and smooth muscle myosin heavy chain [7].

The treatment of myoepitheliomas should be designed as for any benign salivary gland tumour. The mass should be totally removed with a margin of normal gland tissue [10]. The recurrence rate is similar to that of the pleomorphic adenoma (15–18%) [1].

## CONCLUSION

Myoepithelioma is a rare benign salivary gland tumour, microscopically composed almost exclusively of cells with myoepithelial differentiation. Epitheloid variant is a rare microscopic variant of myoepithelioma, clinically presenting as a slow growing mass of parotid gland. Surgeons as well as pathologists should keep this rare tumour in mind, while dealing with salivary gland lesions in order to carefully distinguish this entity from other soft tissue and salivary gland tumours.

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