Myoepithelioma of parotid gland - A rare entity

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Abstract
Myoepithelioma is a rare salivary gland neoplasm. It is seen around 1-1.5% among all salivary gland. Parotid gland is the most common site of occurrence. The second most common site is palatal minor salivary glands. This neoplasm came into literature long back but the histopathologic picture doesn't seem to be well characterized. Many authors attribute the complexity of this neoplasm. The myoepithelial component that is seen between the basement membrane. It is also seen in the basal plasma membrane of acinar cells. Traditionally it's been represented that it consists of spindle myoepitheliocytes. Pathologically myoepithelioma is accepted as a specific entity. In this article, we are presenting a case of a 76-year-old male with salivary gland myoepithelioma, an especially rare entity. We have also given a brief description of its clinical and pathologic feature.

Keywords: Myoepithelioma, Parotid tumor, Salivary gland tumor.

Introduction
Salivary gland neoplasm composed solely of myoepithelial cells that are intriguing, and uncommon. Myoepitheliomas of salivary glands are very rare entity; it comprises around 3% of all maxillofacial neoplasm and 1–1.5% of all salivary gland neoplasm.[1-3] Myoepitheliomas mainly benign in nature. Several authors attribute this complexness to the myoepithelial part of those tumors (Savera & Zarbo, 2004)[4] but it is defined as the only solid (without myxochondroid elements) tumors containing spindle, the plasmacytoid, epithelioid or clear cell in morphology. Sperandio et al. stated that growth might contain one specific cellular kind, or contains a combination of various histologic patterns, additionally to this Ellis & Auclair in 2008 quoted that there is a wide form of histologic varieties and sub types that complicate their classification and identification.[5] Sheldon in the year of 1943 classified myoepithelioma. He also reviewed three such neoplasms for the first time.[6] Here we are presenting a rare case of benign myoepithelioma of parotid gland of right side. We do to believe that this entity is rare, but there is additionally a prospect that in general, physicians are simply unaware of its existence.

Case Report
Patient was a 76-year-old male who presented with a 12-month history of gradually increasing, and apparently painless mass in the right pre-auricular region. His past medical history was negative. With Clinical Examination it had been evident that the mass was around5 cm x 4 cm in size that in the area of the parotid gland region of right side. The growth was well-circumscribed, and external appearance was smooth. It was firm, mobile but non-tender on palpation. The lesion was massive, the facial nerve remained intact, and there was no cervical lymphadenopathy either, there was no discharge from the area. Antero-posteriorly swelling was extending from the tragus to the malar region, super inferiorly from malar region to angle of mandible (Fig. 1, 2 & 3); the oral cavity was normal. FNAC was performed and also the microscopic examination unconcealed the presence of excellent cellularity and background of chondromyxoid material. There were clusters and singly scattered epithelial cells, the cells have a good quantity of cytoplasm and regular, spherical nuclei without nucleoli, suggesting benign nature of the lesion like pleomorphic adenoma. A computerized axial tomography scan unconcealed the presence of an abnormally massive right salivary gland with the massive multilocular cystic lesion. The tumor occupied largely the superficial lobe of the gland and was separated with thick septations (Fig. 4 & 5).

Superficial Parotidectomy was decided because the surgical operation plans based on the varied investigations and screening tests. Under general anesthesia, a well-circumscribed nodular mass was excised surgically with an encompassing a superficial lobe of the salivary gland (Fig. 6 & 7) and excised mass was sent to the Department of Oral Pathology and Microbiology for additional histologic examinations. On gross examination, the removed surgical material was a solid neoplasm.It was having a reddish hue on it surface. It measured around 7 cm × 4 cm × 5 cm. The lesion was encapsulated, separating from the encircling parotid tissue and showed entirely cystic configuration except for a solid area contiguous to the capsule (Fig. 8).

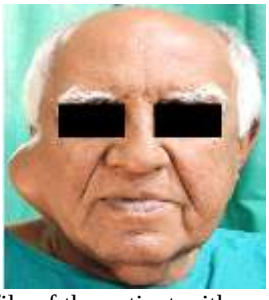

Fig. 1: Front profile of the patient with swelling appreciated on the right side.

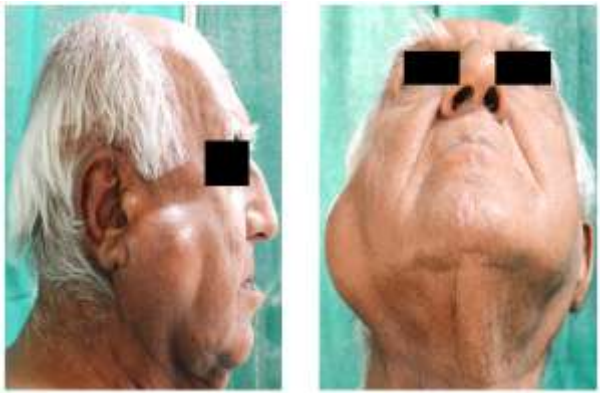

Fig. 2-3: Lateral and Worms eye view, shows extent of the swelling in the region.

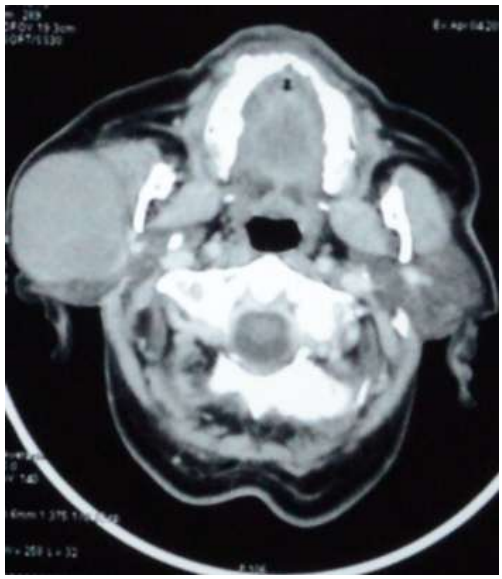

Fig. 4: CT Scan Axial View

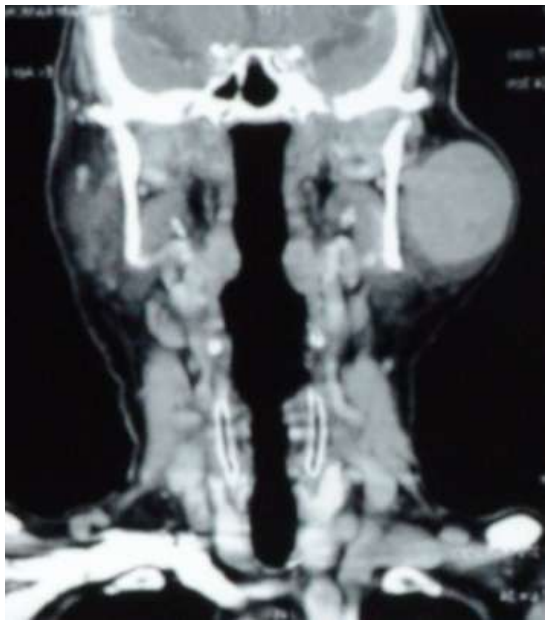

Fig. 5: CT Scan Coronal View

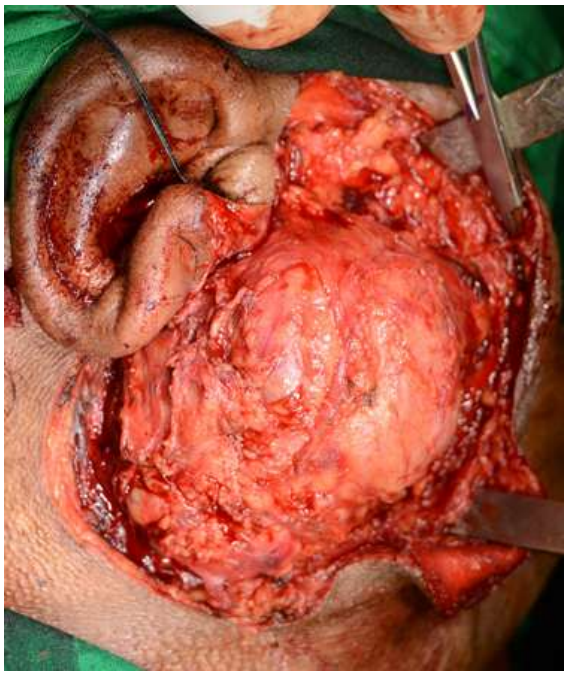

Fig. 6: Surgical Exposure through Modified Blair's Incision

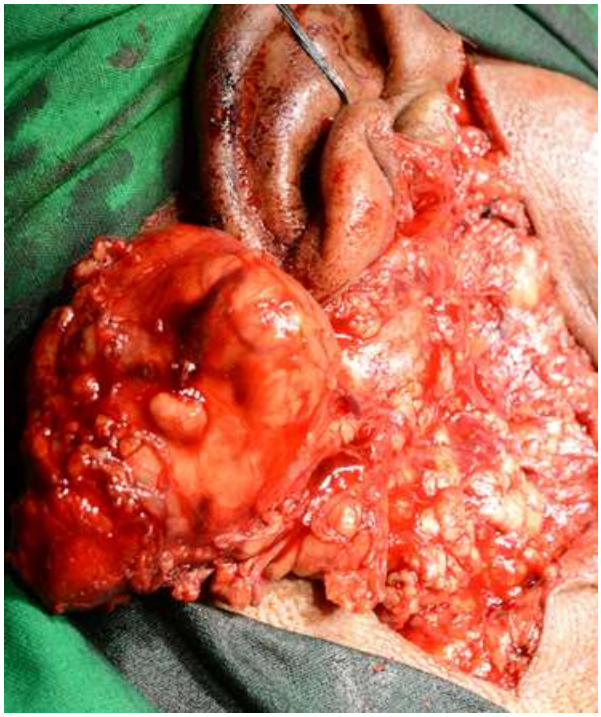

Fig. 7: Surgical excision of the parotid mass

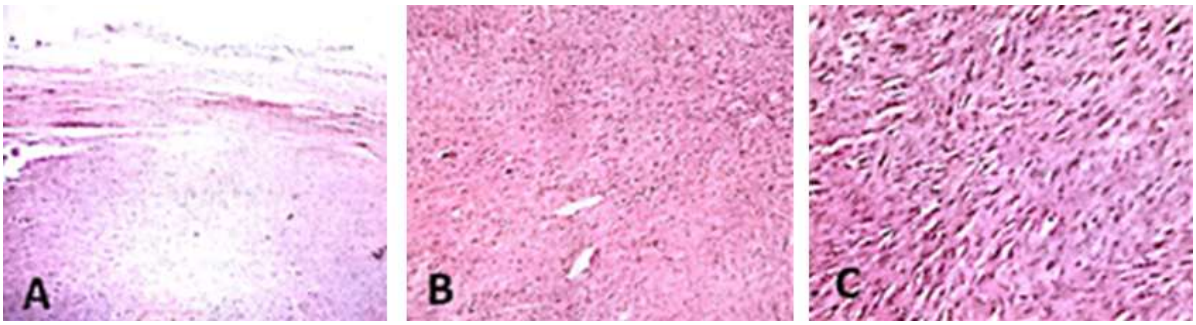

Fig. 9-A: Hypercellular Tumour; **B.** Spindle Cells arranged in Sheets; **C.** Spindle Cells arranged in Fascicles

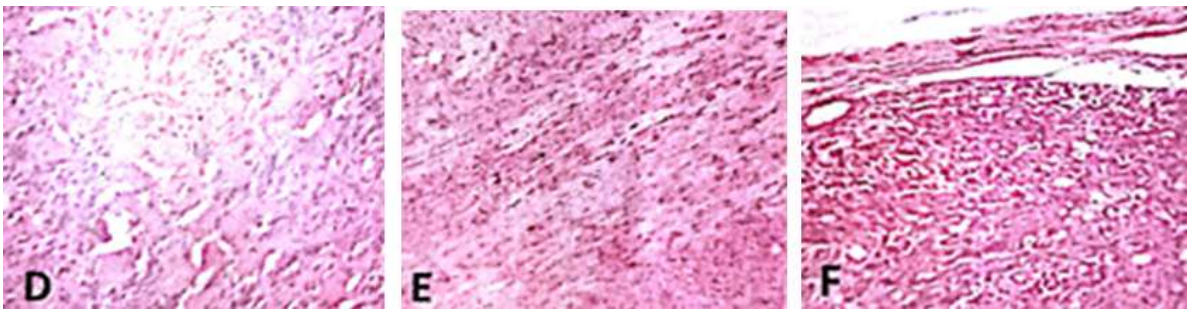

Fig. 9-D: Cytoplasm surrounded by Spindled Myoepithelial Cells; **E.** At Peripheral area of Cytoplasm Hyalinized & Myxoid Cells are present; **F.** Cord like arrangement of Tumour Cells & Duct like Cells in Stroma.

Histopathological Examination

1. Microscopic examination showed hypercellularity (Fig. 9-A) & composed of preponderant spindle-shaped cells organized in sheets (Fig. 9-B) and fascicles (Fig. 9-C) with a negligible quantity of stroma.
2. The cytoplasm was scanty, eosinophilic with fuzzy cytoplasmic borders and spherical to oval hyaline foci encircled by spindled myoepithelial cells (Fig. 9-D).
3. The neoplasm had a myxoid stroma and was hyalinized at places (Figure 9-E) with twine like an arrangement of tumor cells and duct-like structures (Fig. 9-F).

Moreover, we observed no infiltrative growing patterns, necroses, or atypical cytology.

Discussion

myoepithelioma are very rarely diagnosed in clinical practice. Sheldon in the year of 1943 classified myoepithelioma. He also reviewed three such neoplasms for the first time.[6] It was initial formally recognized as a sub type of salivary neoplasm in 1991.[7] It is mostly seen in the age group range of nine to eighty-five years, with the mean age forty-four years. Parotid gland is the most common site to occur (40-50%).The second most common site is palatal minor salivary glands (21%).[2,9] It is derived from neoplastic basket cells or myoepithelial cells. These cells are usually seen between the basement membrane, and in the basal cell membrane of acinar cells. Myoepithelial cells are composed of smooth muscle actin, myosin, and intermediate filaments. They have a contractile unit that helps in glandular secretions.[8] Myoepitheliomas had historically been represented as tumors consisting of spindle myoepitheliocytes (Dardick et al., 1989). On morphological basis Myoepitheliomas are divided into: Spindle type (interlacing fascicles with a stroma like appearance) plasmacytoid (polygonal cells with eccentric nuclei, eosinophilic cytoplasm, non-granular), epithelioid (nests or of spherical cells, nuclei is centrally placed, eosinophilic cytoplasm), and clear (polygonal cells with clear cytoplasm, containing plenty amounts of glycogen). The most common variety seen is spindle cell type (65%) followed by plasmacytoid type (20 %) (6) Some says that Myoepithelioma is a monomorphic variant of mixed tumors. Benign Myoepitheliomas ought to be fastidiously differentiated from malignant tumors like malignant myoepithelioma, mucoepidermoid carcinoma, and spindle cell squamous carcinoma. (2, 3)According to the WHO's classification of salivary gland tumors, ''Myoepitheliomas are characterized by an additional aggressive growth pattern than pleomorphic adenomas''. But, many authors have found that the biological behavior of Myoepitheliomas seems to be same as pleomorphic adenoma. (2, 12) medical diagnosis of myoepithelioma is with pleomorphic adenoma, which is the commonest salivary gland tumor and is characterized by the biphasic proliferation of epitheliocytes and myoepitheliocytes and a stromal element with myxoid and chondroid foci (Ellis & Auclair).

The case that we report here corresponds histologically to a Spindle-type myoepithelioma. On gross examination, Myoepithelioma is well-circumscribed, with a swish surface with none degenerative changes.[11] In the presented case tumor measures 7 cm x 5 cm that was well demarcated. Parotid Myoepitheliomas are mostly encapsulated, but the minor salivary glands Myoepitheliomas does not show a capsule. Myoepithelioma is distinct from plemorphic

adenoma like with the lack of ducts and absence of myxochondroid areas. The identification is created with a combination of radiologic imaging, and tissue histology. In one study using CT scans, the bulk of cases showed well circumscribed, lobulated, homogeneous lesions; similar to what we have presented in our case.[14]

Treatment of benign Myoepitheliomas is the complete surgical removal. Most of the Myoepitheliomas have a benign course with a marginal tendency for recurrence so it is better to take normal soft tissue margin. Seventh cranial nerve should be preserved. The prognosis of Myoepitheliomas is somehow good; but the patients have to be in regular follow-up to rule out the chances of local recurrence. Whereas myoepithelioma has no specific clinical features, but it is pathologically accepted as a definite entity. Parotid gland is the most common site where this entity appears most frequently but the occurrence rate is lower. This entity is most commonly misdiagnosed as pleomorphic adenoma or parotid cyst. Follow-up will be enforced.

Conflict of Interest: None.

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