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Epithelial Myoepithelial Carcinoma of Partoid Gland - A rare tumor with squamous differentiation

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Abstract

Introduction: Epithelial Myoepithelial carcinoma is a rare malignant tumor of salivary gland, most commonly occurring in parotid gland. It is considered as low-grade malignant tumor and is seen more often in female patient in sixth decade of life.

Case History

We present a rare case of EpithelialMyoepithelial Carcinoma in 62 yearold male patient who presented with parotid swelling since 6 months. Superficial parotidectomy was done. The histopathological diagnosis was low-grade Epithelial Myoepithelial carcinoma. We present this case to highlight the rarity of this tumor, squamous differentiation and unusual clinical behaviour i.e.metastasis to adjacent lymph nodes.

Keyword: Epithelial Myoepithelial Carcinoma, Parotid gland, Male, Squamous differentiation

Introduction

Epithelial Myoepithelial Carcinoma (EMC) is a rare malignant tumor of salivary gland, which accounts for 1% of all salivary gland tumors (1, 2). Donath first introduced this tumor in 1972 (3). In 1991, WHO recognised EMC as a distinct subtype of salivary gland adenocarcinoma (4).

Case Report

A 62 years old male patient presented with left sided parotid mass since 6 months. The swelling was painless in nature. CT scan revealed a well-defined isodense, solid cystic lesion with heterogeneous peripheral contrast in leftparotid gland. Small subcentimetric enhancing lymphnodes were seen.

Superficial parotidectomy was done and specimen was sent for histopathological examination.

Histopathological Examination

Specimen of superficial parotidectomy was received with attached lymph nodes. Gross examination revealed a tumor measuring 3.7 x 3 x 2 cms, cut section of which was solid and cystic. 4 lymphnodes were identified adjacent to the tumor tissue. (Figure 1).

Microscopy revealed a tumor showing bilayered arrangement of small luminal cells having eosinophilic cytoplasm with outer myoepithelial cells having clear cytoplasm. Tumor revealed glandular pattern with few cystic areas. Neoplastic cells revealed mild nuclear atypia and focal area of squamous differentiation. (Figure 2)No evidence of necrosis was noted. 2 out 4 adjacent lymph nodes revealed metastasis.

PAS staining highlighted the eosionophilic basal membrane of the tubules.

Considering these features diagnosis was given as low grade Epithelial Mypepithelial Carcinoma with focal areas of squamous differentiation metastasizing to 2 out of 4 adjacent lymph nodes.

Discussion

EMC is considered as a low-grade malignant tumor which may commonly reccur locally after excision. This tumor is commonly seen in female patients in 6th decade of life. The patient presents as a slowly growing tumor most commonly seen in parotid gland. However, minor salivary gland are also involved in rare occasions (5).

In Contrast, our case was a male patient and the tumor progressed within 6 months. Diagnosis of EMC is based on histopathological examination. IHC markers may help to support the diagnosis. Clinical and radiological examinations as well as FNAC do not provide a definitive preoperative diagnosis as seen in our case.

Histopathological Examination of EMC reveals a biphasic pattern of tumor with tubular, glandular or solid growth pattern. Papillary and cystic areas may be present. Depending on the proportion of epithelial and myoepithelial cells the tumor can be classified as classic or epithelial dominant or myoepihelial dominant pattern. In our case, classic pattern was seen. PAS stain highlight eosinophilic basal membrane surrounding the aggregates of tumorcells. Rarely EMC shows squamous differentiation, similar findings were noted in our case[6]. Immunohistochemistry of this tumor displays positivity for actin, P63 and S100 protien for clear cells, while epithelial ductal cells show intense staining for cytokeratin, CK7, CK5/6 and EMA.

Differential diagnosis of EMC include Pleomorphic Adenoma, Adenoid Cystic carcinoma, Acinar cell carcinoma, Mucoepidermoid carcinoma and Metastastic renal cell carcinoma.[7, 8]

The usual treatment is wide surgical excison including adjacent lymph node and follow up of case as this tumor has high rate of local recurrence [9].

Our patient is on follow up.

Conclusion

EMC is a rare salivary gland neoplasm showing biphasic pattern. Histopathological examination is most important in giving definitive diagnosis. Although this tumor reveals low-grade malignant features, recurrences are common hence, post-operative follow up is recommended.

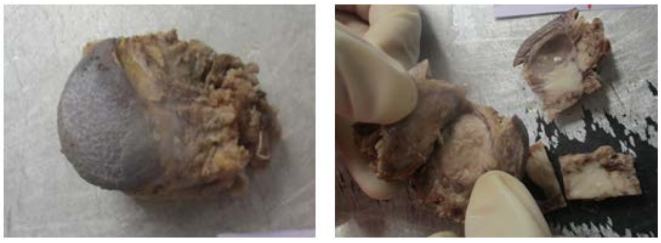

Figure 1: A grey white tumor with solid and cystic areas.

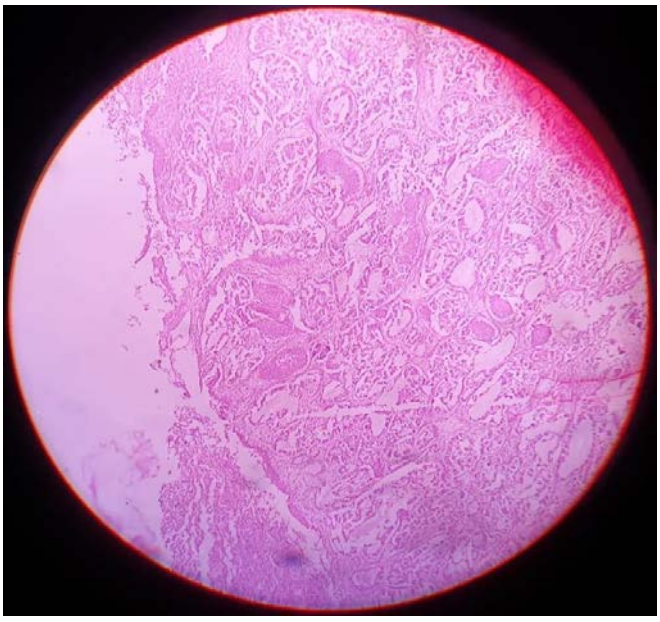

Figure 2: Microscopic features i.e. glandular pattern (100x H&E)

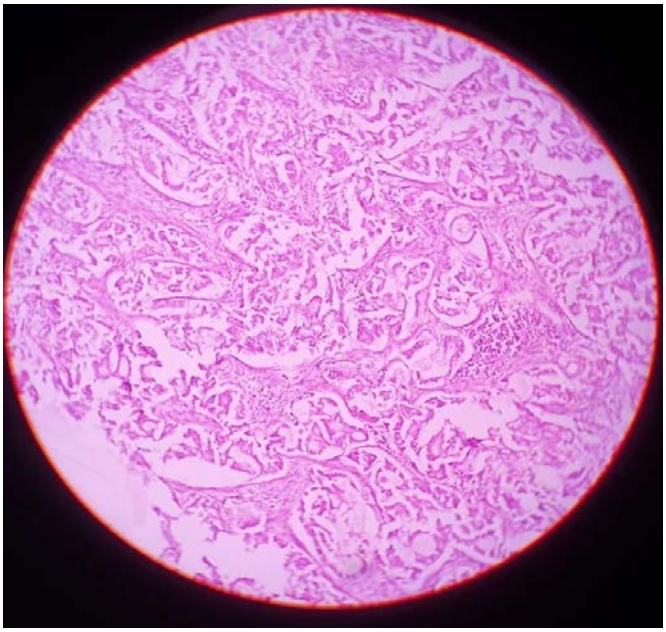

Figure 3: Biphasic appearance of tumor showing inner epithelial cells and outer myoepithelial cells with clear cytoplasm (400 X H&E)

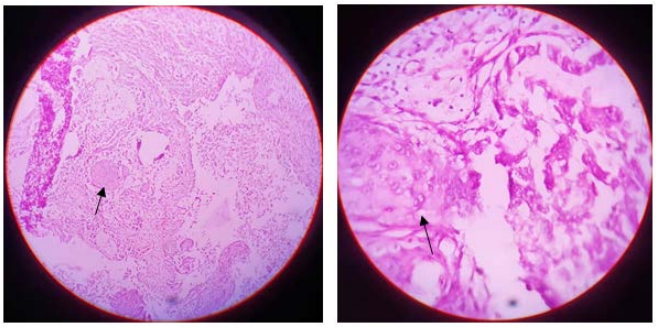

Figure 4: Neoplastic cells with squamous differentiation (A) 100x H & E (B) 400X H&E)

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