

KNOW YOUR FIELD

Myoepithelioma of minor salivary gland

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CASE HISTORY

A 15-year-old female patient presented with an asymptomatic swelling on the palatal aspect of the upper jaw. The patient first noticed the lesion 4 months ago. On examination, the lesion was well-circumscribed, solid mass located near midline, close to the border of hard and soft palate. The lesion was round, 1.5 × 1 × 1cm in its greatest diameter covered by reddish mucosa. On palpation, the lesion was firm and non-tender. The intraoral upper jaw occlusal radiographic examination showed no destruction of subjacent palatal bone, whereas computed tomography (CT) examination revealed scalloping of adjacent hard palate; alveolar process and maxilla were normal. There was no lymphadenopathy. Medical history of the patient was non-contributory. A total excision of the lesion was carried out under local anesthesia. Grossly, the cut section of tumor mass was covered with capsule and showed whitish areas. The surgeons gave provisional diagnosis of *benign salivary gland neoplasm*.

HISTOPATHOLOGY

Under scanner view, the section showed an extremely cellular lesion with scanty connective tissue stroma covered by thick fibrous capsule [Figure 1]. On low magnification, the tumor was composed of sheets, cords and nests of round to oval cells [Figure 2]. Stroma showed fibrous bands and focal myxoid areas [Figure 3]. Occasional tubular and ductular structures were also seen. On high magnification, neoplastic cells displayed an eccentrically placed nucleus and prominent eosinophilic cytoplasm [Figure 4]. Mitotic figures were not evident.

Immunohistochemistry (IHC) markers were studied on representative section which included; SMA, S-100, PAN-CK and EMA. IHC analysis revealed diffuse reactivity for

SMA [Figure 5a], S-100 [Figure 5b], PAN-CK [Figure 5c] and focal reactivity with EMA [Figure 5d].

Final diagnosis

Based on above findings, the final diagnosis of myoepithelioma of plasmacytoid variant was given.

DISCUSSION

When one encounters a circumscribed palatal tumor; like in this case, differential diagnosis includes

- Pleomorphic Adenoma
- Myoepithelioma.

Our case showed plasmacytoid cells, scanty myxoid areas and focal tubular and ductular structures. Because of which it was diagnosed as pleomorphic adenoma initially. But as per the criteria given by Dardick,^[1] if the tumor has occasional ductular, glandular structures comprising not more than 5% of total tumor cells and scanty myxoid areas surrounded by a bulk of myoepithelial cells, lesion should be diagnosed as myoepithelioma.

Myoepithelial tumor cells can be either spindle (elongated to ovoid), epithelioid (round to polygonal), hyaline (plasmacytoid)

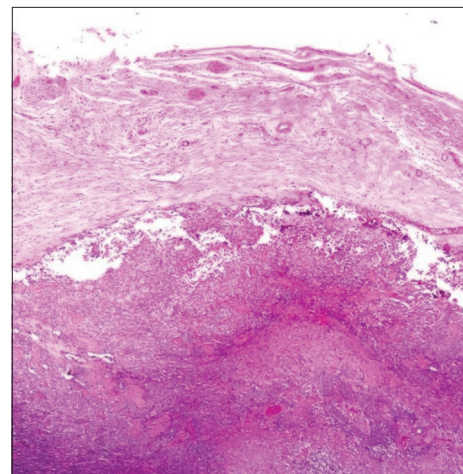


Figure 1: Photomicrograph shows cellular tumour with thick fibrous capsule (H&E stain, x40)

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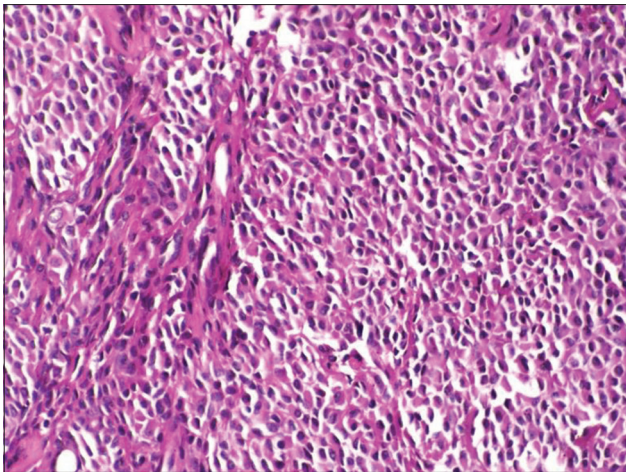


Figure 2: Photomicrograph showing round to oval shaped cells arranged in cords, sheets and nests. (H&E stain, x100)

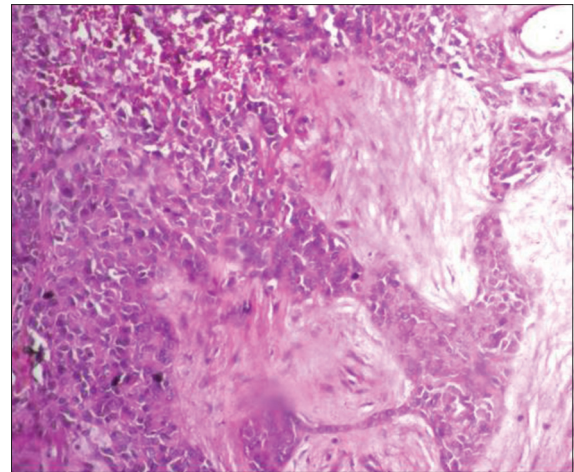


Figure 3: Photomicrograph showing collagenous areas with focal myxoid change in stroma (H&E stain, x100)

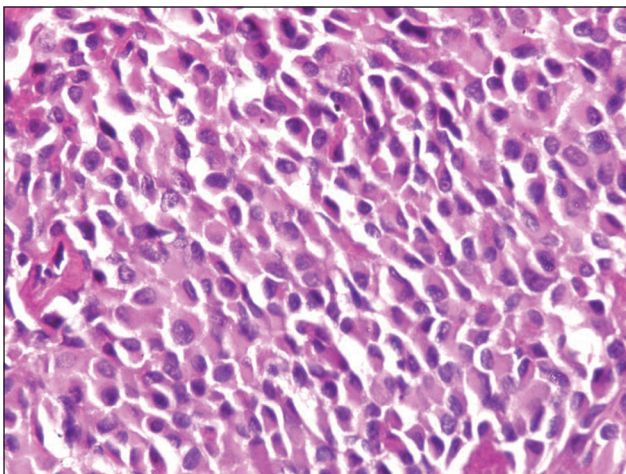


Figure 4: Photomicrograph showing sheets of plasmacytoid cells (H&E stain, x400)

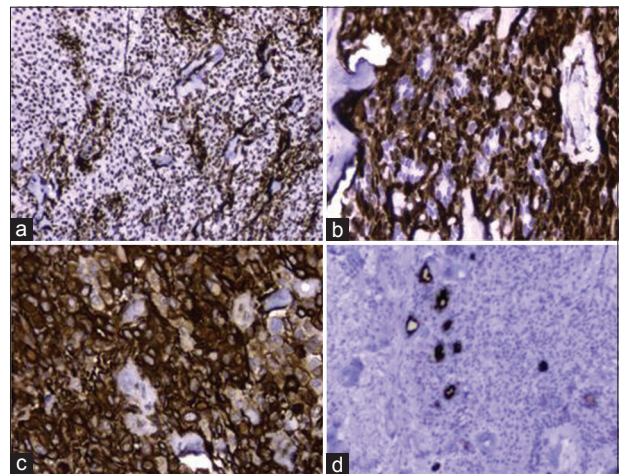


Figure 5: Photomicrograph showing diffuse immunoreactivity for (a): SMA (IHC stain, x40), (b): S-100 (IHC stain, x100), (c): PAN-Ck (IHC stain, x100) and (d): focal immunoreactivity with EMA (IHC stain, x40)

or clear cells.^[2] These tumor cells can be arranged in various architectural patterns like non-myxoid (solid), myxoid (pleomorphic adenoma like), reticular (canalicular like) and mixed.^[3] Myoepithelioma shows focal to more diffuse myxoid growth pattern and infrequent foci of chondrocytic differentiation.^[1] In myoepitheliomas of minor salivary glands, round to polygonal cells with eccentric nucleus and prominent homogenous and brightly eosinophilic cytoplasm are present.

Ductal cell differentiation shows positive EMA reaction which is considered significant. As in pleomorphic adenoma, EMA reactivity is found to be diffuse (greater than 5%), whereas in myoepitheliomas, it is focal (less than 5%).^[1] This ductal cell differentiation is necessary for differential diagnosis between pleomorphic adenoma and myoepithelioma.^[4]

Because of various architectural patterns, at times, it is difficult to differentiate myoepitheliomas from other tumors,

especially pleomorphic adenoma. Although it has been suggested that these lesions are two different forms of the same entity, myoepitheliomas present a more aggressive behavior.^[5,6]

CONCLUSION

In our case, plasmacytoid type myoepithelial cells were predominant with scanty myxoid areas. Tubular and ductular structures were less than 5 percent in all the sections studied as evident by focal reactivity with EMA. According to diagnostic criteria given by Dardick and IHC analysis, the histopathological diagnosis was consistent with benign myoepithelioma of plasmacytoid type.

Our experience with this case highlights the importance of detailed histomorphological study and correlation with radiological and immunohistochemical findings.

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