Mucoepidermoid carcinoma in young female: a case report

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Abstract

Pleomorphic adenoma and mucoepidermoid carcinoma are the two most commonly seen tumors in salivary glands. Mucoepidermoid carcinoma usually occurs in minor salivary glands in the palate. It represents a diverse clinical and biological behaviour but usually appears as asymptomatic swelling. Mucoepidermoid carcinoma mainly occurs in elderly people but here we present clinical behaviour, radiological features and histopathological grades of a case of mucoepidermoid carcinoma in a young female. The palatal mucoepidermoid carcinoma in this patient was treated with surgical excision and no recurrence was seen in the follow up.

Key Words: Carcinoma, Mucoepidermoid, Mucosa, Palate.

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Introduction

Salivary gland tumors account for 3% of all head and neck malignancies[1,2]. Mucoepidermoid carcinoma (MEC) is most common malignant salivary gland tumor. It was firstdescribed by Stewart *et al*[3] in 1945. It consistsof a mixture of cells which include mucus-producing, epidermoid or squamous and intermediate types.[3] The peak age of occurrence of MEC is sixth decade of life most commonly involving the parotid gland[4] but the high incidence of malignancy in minor salivary gland tumors is also well established.[5] Affected minor glands are usually located on the palate, followed by the lower lip as the second most common site.[6] It can be of three types based on malignancy-low, intermediate, and high grade which constitute about 61.7%, 26.5%, and 11.8% of tumors, respectively. It shows a variety of biological behaviours, and the high-grade MEC is a highly aggressive tumor, while low-grade counterpart shows a more benign nature. MEC can be treated by surgical resection and post-operative radiotherapy.[7]

Case Report

A 24 -year-old female patient visited department of oral medicine and radiology with the chief complaint of swelling on the left side of palate since 3 months. There was pain in left upper back teeth region since 6 months which was gradual in onset, increased in severity with time for which patient consulted the local dentist and the pain relieved on taking medication prescribed by the dentist and did not get the complete treatment. Patient noticed a swelling on the palatal region which was gradual in onset, continuous in progress, initially small in size, now increased to attain the present size with associated pain. (Fig. 1)

There was no history of trauma, fever or similar swelling elsewhere in the body.No history of paresthesia, dysphagia & bleeding. No history of any kind of discharge from the swelling. Her past medical history was non contributory and patient has undergone root canal treatment in respect to 46 and it was uneventful. Patient was married & was having two other members in her family (husband and 1 child). There was no known inherited disorder in her family. Patient brushes once daily with tooth paste in horizontal motion. On general examination, patient was conscious, cooperative and well oriented to time, place and person. Patient was afebrile with pulse rate- 76beats/min, respiratory rate- 18 breaths/min and blood pressure-120/80mm of Hg. No signs of pallor, icterus, cyanosis, edema, anemia and clubbing. On extra oral examination, no abnormality was detected. On intra oral examination, a unilateral, oval shaped submucosal swelling was present on left side of posterior region of hard palate extending medially from midline to palatal gingivae laterally; anteriorly from 24 region to 27 regionsposteriorly which was 2.5 cmx1.5cm in maximum dimensions with intact overlying normal mucosa with distinct and smooth borders, without any secondary changes and discharge. On palpation, inspectory findings were confirmed regarding size, shape and extent. Swelling was soft in consistency, mildly tender and was fluctuant with regular smooth borders without any local rise in temperature. Gingiva was well defined; oval shaped, proliferative, pedunculated growth was present on the palatal aspect of 26 regions involving attached and marginal gingiva which was reddish in color, maximum 0.8 cm in diameter without any discharge with its inferior aspect-

whitish in color in the centre. It is reddish in color, edematous, increased in size having blunt contours with loss of stippling and bleeding on probing is present with respect to all other teeth. On palpation, inspectory findings were confirmed regarding size, shape and extent was firm in consistency, mildly tender without any local rise in temperature.

Radiological Features

On radiographical examination, intra oral periapical radiograph showed an ill-defined radiolucency with respect to coronal portion of 26 involving whole of the enamel, dentin, pulp space extending to radicular portion involving furcation area with ill-defined non-homogenous radiolucency with respect to periapical region of 26, mesiobuccal root of 27 with discontinuation of lamina dura around the roots of 26, 27 S/O periapical abcess-26, 27. (Fig. 2) Oral pantomograph showed ill-defined radiolucency with respect to periapical region of 26 with discontinuation of lamina dura around the root of 26 & well defined multiple radiopacities with respect to radicular portion of 46 S/O RCT treated 46 and floor of maxillary sinus is intact (Fig. 3).

Histopathological Features

Incisional biopsy at the site of swelling was done and sent for histopathological examination (under 10X resolution, H & E stains) which showed both the epithelium and connective tissue. Epithelium was parakeratinised stratified squamous with elongated rete pegs. Connective tissue was loose, fibrous with different types of cells-mucous cells, intermediate cells, epidermoid cells dispersed throughout connective tissue stroma. Many small & medium sized cystic spaces containing mucous –present throughout the stroma S/O mucoepidermoid carcinoma (Low Grade). Excisional biopsy of growth was done which showed collagen fibres, fibroblasts and blood vessels along with inflammatory infiltrate in connective tissue.(Fig. 4) Patient was treated with surgical excision of the lesion along with the extraction of 26. Patient was recalled for regular follow up for 3-4 months.

Fig. 1: Clinical picture

Fig. 2: IOPA

Fig. 3: OPG

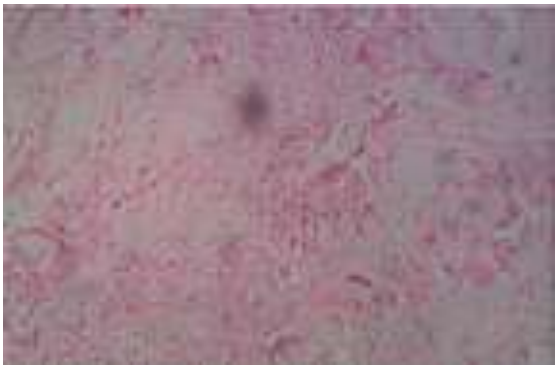

Fig. 4: Histological picture

Discussion

Minor salivary gland carcinomas are a heterogeneous group of malignancies. The etiology is considered to be unknown.[8] It demonstrates mixture of cells like mucous producing, epidermoid or squamous and intermediate types. The peak age of occurrence is 6th decade of life with female predilection; our case is associated with a young female.[3,6] It most commonly occurs in parotid gland in 44.1% of cases and minor salivary glands in 25% of cases.[3] When it involves minor salivary glands, most common sites are palate, retro molar area, and floor of mouth, buccal mucosa, and lips and tongue same as in our case that it involves palate.[7] The lesion is usually painless, symptoms are

pain, dysphagia, bleeding when major salivary glands and tongue is involved.[9] It is observed as localized, fluctuant nodule with a bluish or reddish-purple, smooth, mucosal surface.[10] Mucus may be discharged from a tumor through a small sinus tract as opposed to our case. It is well known to display widely diverse biological behaviour and variable clinical manifestations.

Radiographic examination reveals circumscribed unilocular or multilocular radiolucency in mandibular posterior region.The periphery is usually well-defined, corticated, often crenated or undulating similar to a benign tumor.[11] In our case, the Radiological findings were not evident consistent with MEC.

Histopathologically, low grade MEC shows the presence of more mucous-producing cells than epidermoid and intermediate cells. Prominent cystic structures lined by different cells arethe hallmark of this lesion, solid areas not evident same as in our case. Complete surgical exicision is the main modality of treatment. Treatment of choice for low grade is complete, wide surgical resection of tumor.High grade requires surgical excision with neck dissection. Postoperative radiotherapy is effective with positive surgical margins.[3,4]

Conclusion

Mucoepidermoid carcinoma has a high rate of occurrence in hard or soft palate. It must be considered inthe differential diagnosis of a mass in an area bearing salivary glands, especially the palate. The best outcome can be obtained in early stage, so early diagnosis and treatment are beneficial.

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