INTRODUCTION

Mucoepidermoid carcinoma (MEC) is an epithelial salivary gland neoplasm. MEC was first reported by Massao and Berger in 1942 and first described as a separate pathological entity by Stewart et al., in 1945.1,2 The WHO in 1990 classified it as a malignant neoplasm and named it as MEC. It accounts for <10% of all tumors of salivary glands, whereas it constitutes approximately 30% of all malignant tumors of the salivary glands. It is frequently seen in parotid gland, followed by minor salivary glands. Involvement of minor salivary glands is commonly seen in region of hard palate, soft palate, retromolar region, buccal mucosa, floor of mouth and labial mucosa. Here, we report a case of MEC occurring on the palate in a 44-year-old female patient reported with a chief complaint of a painless swelling on the palate for 6 years and further diagnosed and managed as a case of MEC.

CASE REPORT

A 44-year-old female reported with a chief complaint of a painless swelling on the palate for 6 years. Initially, the swelling was small in size and gradually started increasing for 8–10 months. The patient was in good health with no significant family and medical history. The extraoral examination was unremarkable and no lymph nodes were palpable. On intraoral inspection, a swelling was noted in the right posterior area of the hard palate, not crossing the midline, approximately 6 cm × 4 cm in size with a normal overlying mucosa [Fig.1a]. On palpation, the lesion was nontender and firm in consistency with regular smooth borders and no discharge on compression. In periapical and occlusal radiographs the alveolar bone had no resorption and the floor of the maxillary sinus appeared intact (Fig.2a,2b). Coronal, Sagital and Axial plain CT examination showed a moderately enhancing softtissue density lesion extending posteriorly and inferiorly destroying the hard palate and the alveolar process [Fig.3]. The lesion was surgically excised and sent for histopathological examination with a provisional diagnosis of minor salivary gland tumor. On gross examination, a single

Abstract:

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Keywords: Muco-epidermoid carcinoma of palate.
tissue bit was received measuring 2.5 cm × 2 cm brownish in color, and firm in consistency with a smooth surface [Fig. 1b]. The histopathological examination revealed large cystic spaces with foci of prominent cellular areas which consisted of heterogeneous cellular population mainly composed of mucous cells, few epidermoid cells, intermediate cells, and clear cells. Large mucous-pooled cystic areas lined by mucous cells were also seen [Fig.4]. Few hemorrhagic areas and adjacent large foci of normal mucous acini were evident. The cystic spaces and cellular component were surrounded by thick fibrocapsular tissue and covered by parakeratinized stratified squamous epithelium. The features were suggestive of MEC.
DISCUSSION

Mucoepidermoid carcinoma is the most common malignant salivary gland tumor, accounting for 30% of all malignant tumors.1 MEC is more prevalent in females (approximately 1.5 times) as compared to males. It is commonly seen in the third to sixth decade of life. The most common site of its occurrence is parotid gland, accounting for about 60-70% of cases followed by the palate, retromolar area, and buccal mucosa. Among minor salivary glands, the tumor shows predilection to the hard and soft palate.2,3 MEC is believed to arise from pluripotent reserve cells of excretory ducts that are capable of differentiating into squamous, columnar, and mucous cells.1 In our case, it has affected hard palate of 44-year-old female patient.

Clinically, the majority of palatal MEC appears as firm, painless swellings, and may mimic mucoceles or vascular lesions. Clinical findings and investigations in the present case indicated a surface lesion.

Etiology of MEC is not definitively known. Prior exposure to ionizing radiation is considered as a contributing factor.5 Cases of MEC have been recorded after radiation therapy for thyroid carcinoma or leukemia. Tobacco either in chewing or smoking form has not been implicated as a causative factor of MEC. In the present case the patient had a history of tobacco chewing, which may be an incidental finding rather than the etiological cause.

According to clinical features and histopathologic analysis the tumors are graded into low, intermediate and high grade. In the present case, a histopathological diagnosis confirmed the lesion to be intermediate-grade MEC. Low-grade MEC macroscopically is small and partially encapsulated and microscopically characterized by the presence of more mucous-producing cells.6,7 The intermediate-grade MEC comprises solid rather than cystic architecture with more intermediate cells. All of these features were found in the present case. The high-grade tumor demonstrates solid islands of squamous and intermediate cells which demonstrate considerable pleomorphism and mitotic activity. Mucous cells are infrequent. The histologic grade of the MEC often reflects the clinical manifestations of the tumor. Intraorally, MEC’s tend to be asymptomatic enlargements of prolonged duration.6 Treatment of MEC depends on aggressiveness and the extent of spread of the tumor. When the tumor is confined to the palatal mucosa with intact periosteum, wide excision of lesion along with underlying mucoperiosteum is advised.6 When the tumor infiltrates the periosteum with erosion of underlying bone, excision of lesion along with the underlying bone is indicated. If the lesion is restricted to the alveolar region, alveolectomy is performed.10 This consists of removal of the affected alveolus and a limited portion of the maxilla. Failure to detect lesion in its early stage leads to involvement of overlying maxillary sinus and the nasal cavity, requiring more extensive surgery including; palatlectomy, infrastructure maxillectomy or extended maxillectomies.10,11 Such procedures often require an extra oral approach and need for further reconstructive surgery of the oral defect.

CONCLUSION

General physicians and dental practitioners may be the first health care provider to examine patients with palatal lesions, presenting as non-healing ulcer or swelling. Knowledge of presentation of MEC and its prompt diagnosis will lead to its early detection, thus preventing further spread into adjoining vital structures, reducing the surgical morbidity and improving the prognosis of the disease.
Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

REFERENCES