Case Report

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MUCOEPIDERMOID CARCINOMA: A CASE REPORT

Aparna Srivastava *, Poornima Govindraju **, Balaji Pachipulusu ***, Mahesh Kumar T S ****
* Postgraduate Student, Department of Oral Medicine And Radiology, Rajarajeswari Dental College & Hospital, Bengaluru, Karnataka
** Reader, Department of Oral Medicine And Radiology, Rajarajeswari Dental College & Hospital, Bengaluru, Karnataka
*** Professor & Head, Department of Oral Medicine And Radiology, Rajarajeswari Dental College & Hospital, Bengaluru, Karnataka
**** Senior Lecturer, Department of Oral Medicine And Radiology, Rajarajeswari Dental College & Hospital, Bengaluru, Karnataka

ABSTRACT

Mucoepidermoid carcinoma (MEC) is the most common malignancy of the major salivary glands. The purpose of this case report is to discuss the clinical manifestation, diagnosis, and treatment plan of MEC of the palate. A 21-year-old male subject visited the Department of Oral Medicine And Radiology, Rajarajeswari Dental College & Hospital, Bengaluru, Karnataka, India complaining of a swelling in the left posterior area of the hard palate. Several clinical, radiographic, and histopathological investigations were carried out to rule out the lesion. Incisional biopsy of the lesion confirmed the diagnosis of lesion as MEC of the palate following which a wide surgical excision with adjacent free margins was carried out. This case report highlights the need for proper diagnosis and treatment plan in the cases of malignant tumors as it can lead to morbidity and mortality.

KEYWORDS: minor salivary gland, mucoepidermoid carcinoma, oncology, treatment planning

INTRODUCTION

Salivary gland tumours accounts nearly 5% of head and neck malignancies. Minor salivary gland tumours account for 10–15% of all salivary gland neoplasms and are commonly malignant.[1] The second most common minor salivary gland tumour (12–40% globally) is mucoepidermoid carcinoma after pleomorphic adenoma. Mucoepidermoid carcinoma is more common in females, occurs in the fifth decade of life and is commonly found in the parotid gland. However, the palate is a frequent site when it arises from the minor glands.[2]

CASE REPORT

In this article, A 21-year-old male patient presented with a 2-year history of swelling in the palate region. The swelling was insidious in onset and had gradually grown to its current size. The patient gave history of pain on the palate since 15 days which was sudden in onset, dull, continuous, mild in intensity and non-radiating. His past medical, social and family history were noncontributory. On extra oral examination, face was bilaterally symmetrical and a solitary left submandibular lymph node was palpable measuring about 1×1.5cm oval in shape, firm, mobile and tender (Figure 1). On intraoral soft tissue examination, a solitary well-defined oval-shaped swelling of size 1×2 cm on the left posterior region of hard palate was present extending mediolaterally from the midline to palatal attached gingiva in respect to 26 and anteroposteriorly from the mesial aspect of 26 to the distal aspect of 27 (Figure 2). Overlying mucosa appeared stretched and reddish pink in color. Lobulations are seen over the swelling. Surrounding mucosa appears to be normal. All inspectory findings were confirmed and the swelling was firm to hard on palpation. On hard tissue examination teeth, were normal. So on the basis of history and clinical examination, provisional diagnosis of pleomorphic adenoma was given with differential diagnosis of mucoepidermoid carcinoma and patient was advised for the radiological investigation like

Figure 1: Front view of the patient

Figure 2: Solitary diffuse swelling seen on the hard palate

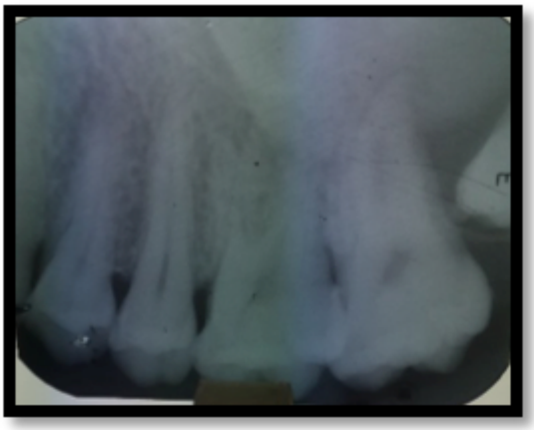

Figure 3: Intraoral periapical radiograph

IOPAR (Figure 3) which showed no abnormality and Lateral occlusal showed the involvement of maxillary sinus hence, Paranasal sinus view (Figure 4) was advised which showed breach on the floor of left maxillary sinus and diffuse radiopacity on the inferior aspect of left maxillary sinus. CT findings (Figure 5) revealed ill defined hetrogenous mass on posterolateral part of hard palate extending inferiorly eroding the alveolar process of maxilla and left maxillary sinus and the patient was

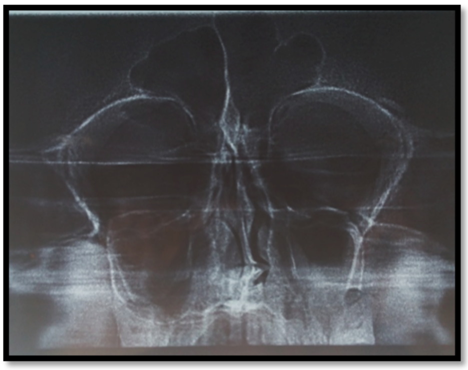

Figure 4: Paranasal sinus view

Figure 5: Axial CT Image

Figure 6: Post-operative picture

referred to department of general surgery for surgical excision (Figure 6) and an obturator was placed on the surgical site and the specimen was sent for histopathological examination which revealed mild keratosis, the subepithelium showed the mucous acini arranged in a lobules, separated by fibrous septae. Three types of tumor cells were seen : intermediate, mucous and epidermoid. Perineural invasion was not observed with no evidence of cellular atypia. These features were representative of low grade mucoepidrmoid carcinoma and patient is under follow up.

DISCUSSION

Mucoepidermoid carcinoma (MEC) is most common malignant salivary gland tumor, first described as a separate pathologic entity by Stewart et al. in 1945.[3] As its name suggests, MEC is composed of a mixture of cells, including mucus-producing, epidermoid or squamous and intermediate types.[4] The peak age of occurrence of MEC is in the older age group like sixth decade of life, with a mean of 44.5 years.[5,6] MECs have a slight female predilection and are uncommon in the first decade of life. MECs have a great predilection for the hard palate or soft palate or both followed by the lower lip as the second most common site of minor salivary glands.[7] Epithelial salivary gland neoplasms are rare to occur in adults and children, accounting for less than 3% of all head and neck tumors.[8] Epithelial malignancies originating in the minor salivary glands account for approximately 15% of all salivary gland neoplasms. MEC of the oral cavity originates in the ductal epithelium of the major salivary glands or minor salivary glands. There have been occasional case reports of primary cutaneous MECs considered to originate in sweat glands and also in the vermillion border of the lower lip, where there are no salivary glands. MEC of salivary glands is believed to originate from pluripotent reserve cells of excretory ducts that have potential to differentiating into squamous, columnar, and mucous cells.Clinically, the most the of palatal MECs appears as firm swellings and may resemble mucoceles or vascular lesions.MEC shows a diversity of biological behaviors Low, intermediate, and high-grade neoplasms which account for 61.7%, 26.5%, and 11.8% of tumors, respectively, and the high-grade MEC is an extremely aggressive tumor, while low-grade counterpart shows a more benign nature.53 % of MEC tumors occur in major salivary glands; 45% of parotid gland is affected most persistently, followed by the minor salivary glands of the palate.[7] The factors such as tumor grade, neural invasion, lymph node metastasis, extension of soft tissue, and microscopic residual disease have exposed a connection with recurrence rates and survival factors. Grade appears to be the most important prognostic indicator. Although the relationship between the type of surgical treatment and survival rates are not known, it is clear that local and regional recurrence is most common to occur in patients with positive margins.The main modality of treatment of MEC, like in most types of salivary gland malignancies, is surgical resection, and post-operative radiotherapy seems to be efficient Management of the low grade mucoepidermoid of the minor salivary glands involves wide local excision with adequate tumor- free margins.[2]. The removal of a portion of the jaw is necessary if there is bony infiltration, then. Aggressive surgery is done for the treatment of high grade tumors with or without postoperative radiotherapy and chemotherapy[3, 5]. Individuals with low grade tumors have a good prognosis with greater than a 90% cure rate. In contrast, high grade tumors have a poor prognosis with only a 20 to 30% survival rate.[11,12]

CONCLUSION

In the present case palatal swelling was imitating pleomorphic adenoma clinically histologically it revealed as mucoepidermoid carcinoma hence, the thorough examination of the palatal swellings should be followed so that it may not lead to unnecessary treatment and delay in diagnosis of true disease; hence, these kinds of swellings must be considered judiciously and interdisciplinary approach will lead to the successful treatment.

CONSENT

Written informed consent was acquired from the patient for publication of this case report and any accompanying images.

CONFLICT OF INTEREST & SOURCE OF FUNDING

The author declares that there is no source of funding and there is no conflict of interest among all authors.

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