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Case Report

A High Grade Variant of Mucoepidermoid Carcinoma- A Case Report

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ABSTRACT:
Mucoepidermoid carcinoma is the second most common salivary gland neoplasm and the most common malignant tumor of all salivary gland tumors. The histological variants are intraosseous and sclerosing types. The most common site in minor salivary reion is palate. The histological examination reveals mucous cells, intermediate cells and epidermoid cells. Here we present a case report of mucoepidermoid carcinoma in a 55 year old female patient.
Key words: Mucoepidermoid carcinoma, mucous cells, salivary gland.

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INTRODUCTION

Mucoepidermoid carcinoma is a malignant epithelial tumor that arises from the pluripotent cells of excretory ducts of salivary gland epithelium. It was first described by Massao and Berger in 1924. Previously it was termed as mucoepidermoid tumor, and was considered to be a benign lesion. WHO in 1990 classified it as a malignant neoplasm and renamed it to mucoepidermoid carcinoma.[1] That there is no uniformly accepted grading system for Mucoepidermoid carcinoma, Foote and Frazell concluded that all Mucoepidermoid tumors were malignant, albeit in degree, and classified them as low, intermediate and high-grade tumors. Jakobson et al. determined grade primarily from presence or absence of invasive growth. [2] Salivary gland tumours are an important part of the Oral and Maxillofacial Pathology and represent 3-5% of all head and neck neoplasms. [3] Mucoepidermoid carcinoma is the most common malignant tumor of the major salivary glands (12–29%). The common sites of its occurrence are palate, retromolar area, floor of the mouth, buccal mucosa, lips, and tongue. The greatest incidence occurs between 3rd and 6th decade of life, but it may occur at any age and has a slight predilection for women than men (3:2). The case report presented is the rare reports of the minor salivary gland malignancy of mucoepidermoid carcinoma involving the palate.[4]

CASE REPORT

A 55 yr old female patient reported to the out patient department with the chief complaint of swelling and pain in the palate for the past 1.5 months. 20 days back patient noticed ulcer which gradually increased in size. Nothing relevant was found in the past medical and past dental history. No palpable lymph nodes were noticed on palpation. On examination, swelling of approximately 7 cm x 5 cm extending anteriorly from left lateral incisor to posteriorly at maxillary tuberosity and medially mid palatal region to laterally at palatal margins. Ulcerated areas were on anterior palatal region. On palpation, the swelling was firm in consistency, tender on palpation, bleeding from ulcerative lesion. The patient was advised for the investigation of PNS radiograph which revealed radiolucency in relation to the left nasal spine with poorly defined margins. For confirmatory diagnosis incisional biopsy was done and the gross specimen was sent to the Department of Oral Pathology and Microbiology with multiple tissue specimens, measuring 14 mm x 6 mm, 13 mm x 3 mm in size, irregular in shape, soft in consistency

and whitish in colour. In histopathological examination, the section revealed highly cellular connective tissue stroma, having solid sheets of basaloid, intermediate cells and epidermoid cells with scattered mucous cells having foamy cytoplasm and very few cystic spaces were also appreciated. On the basis of clinical, radiographic and histopathological features, final diagnosis was high grade mucoepidermoid carcinoma.

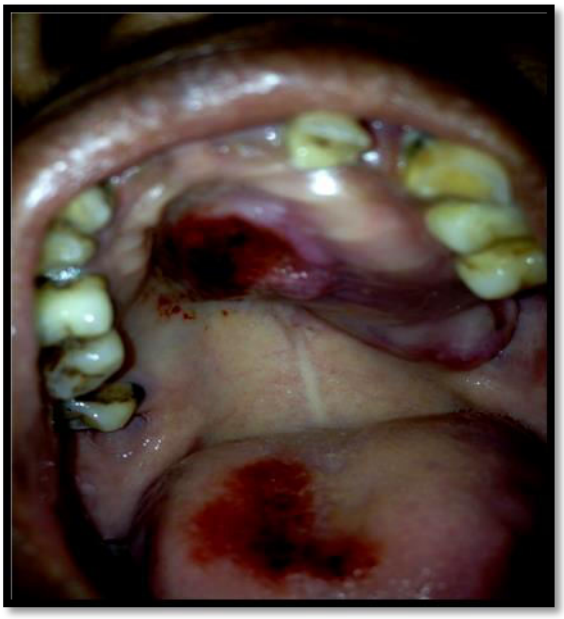

Figure 1: Photograph showing the intraoral view of the lesion and the biopsy site.

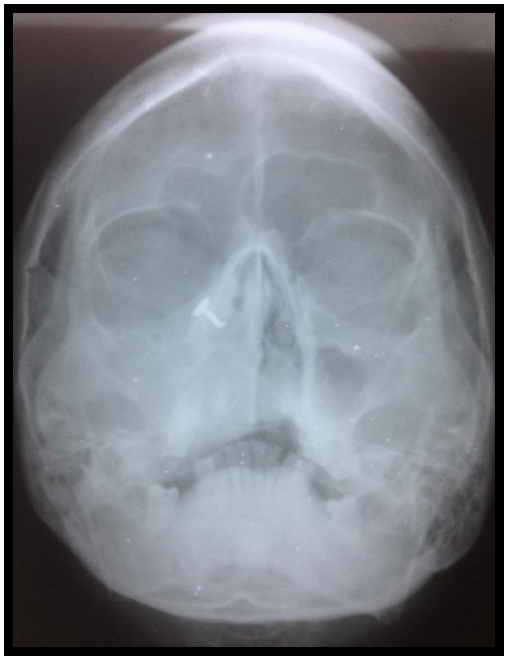

Figure 2: PNS radiograph of the patient revealing radiolucency at nasal spine

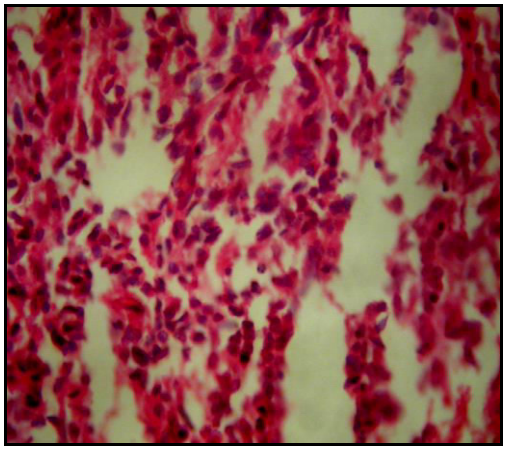

Figure 3: Photomicrograph (40x) of H/E stained section showing intermediate cells.

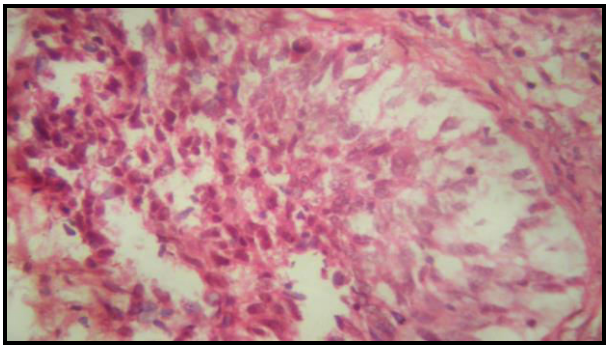

Figure 4: Photomicrograph (40x) of H/E stained section showing mucus cells.

DISCUSSION

Salivary glands are generally divided into the paired major glands, and the diffuse minor glands. The paired parotid, submandibular, and sublingual glands comprise the major glands, with minor salivary glands distributed throughout nearly the entirety of the oral mucosa. [5] Salivary gland carcinoma accounts for 3 to 4% of all head and neck cancers, and of these, mucoepidermoid carcinoma is the most common type.

Mucoepidermoid carcinoma demonstrates highly variable clinical behaviour, ranging from slow to indolent to locally aggressive and highly metastatic tumors. Mucoepidermoid carcinoma occurs predominantly in the parotid salivary glands. In the minor salivary glands, it is most frequently found on the palate, followed by the retromolar area, buccal mucosa, tongue, lips and floor of the mouth, sinuses, and larynx. [6] It accounts for approximately 35% of all malignancies of the major and minor salivary glands. [7]

The first report on mucoepidermoid tumours was by Stewart. He divided these tumours into relatively favourable and highly unfavourable. The classification of Mucoepidermoid carcinoma into low, intermediate and high grade was based on the relative proportion of cell types. [8, 9] As the name suggests mucoepidermoid

carcinoma mainly consists of mucin producing cells and epidermoid cells. These cells are believed to arise from pluripotent reserve cells in the salivary duct system. These reserve cells may undergo neoplastic transformation at any stage of maturation and develop into immature mucin producing cells, duct like epidermoid cell or intermediate cells, leading to formation of MEC.

After systematic review of its histology and degree of differentiation the World Health Organisation classification in 1991 recommended that the term "mucoepidermoid tumour" is changed to "Mucoepidermoid carcinoma". [10] Low grade tumors contain more mucous cells and have better prognosis than high-grade tumors. Low grade tumors are most common type of MEC followed by high grade then intermediate grade lesions. High grade tumors are painless, fast growing lesions that may cause extraoral ulcerations, infiltrate to adjacent tissues and metastases while low grade tumors are generally slow growing, asymptomatic lesions that are smaller than 5 cm diameter. As our case is a high grade, the tumor generally metastases to lymph nodes, lungs and bones. In some cases the lesion may be bluish purple colour like a vascular lesion. This kind of clinical appearance is associated with mucin accumulation. But our case didn't show any positive lymph node palpation. [11] Postoperative tumor recurrences were marginally more common in high grade than in low-grade tumors. [2]

Also, the mucoepidemoid carcinoma mostly occurs in the salivary glands but has also been reported in the respiratory tract, esophagus, breast, pancreas, genitals, anus, lips, mandible and rarely in the thyroid. [12]

The mucoepidermoid carcinoma is most common malignant tumor of salivary gland and second most seen after benign pleomorphic adenoma in palatal region. It is important to make a diagnosis by histological examination followed by clinical and radiographical examinations.

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