

Case Report

Mucoepidermoid Carcinoma of Palate: A Case Report

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Abstract: Salivary gland carcinomas are a rare and clinically diverse group of neoplasms among which mucoepidermoid carcinomas (MEC) are reported to be most frequently occurring. MEC display a variety of biological behaviors and variable natural history. We report a case of mucoepidermoid carcinoma. Histopathological features suggested intermediate grade mucoepidermoid carcinoma. Surgical resection was done. Follow up of two years did not show any recurrence. Maxillary MEC should be followed-up for longer period as they have worse prognosis than mandibular lesions.

Keywords: Mucoepidermoid carcinoma, Palate, Surgery.

INTRODUCTION

Mucoepidermoid carcinoma (MEC) is the most common malignant salivary gland tumor consists of both epidermal and mucous cells in varying proportion [1]. It accounts for less than 10% of all salivary gland tumors [2,3]. About 2/3 arise within the parotid gland and 1/3 arise within the minor salivary glands. It develops at any age but prevalence is more among women than men and occurs between the third and sixth decades [4]. Also the percentage of benign tumors occurring in the palate was higher than that of malignant tumors [5].

The tumor usually forms as a slowly growing, painless, fixed swelling of varying duration that sometimes grows as accelerated growth before clinical presentation. Symptoms include trismus, dysphagia, tenderness and intraoral tumors are often fluctuant and bluish-red, and may resemble mucoceles or vascular lesions, which occasionally invades the underlying bone. Pain is associated with high grade malignant tumors [8].

Histologically, MEC is classified into three types of malignancy—low, intermediate, and high grade using five histopathological features namely intracystic component, neural invasion, necrosis, mitosis and anaplasia [4,6]. MEC displays a variety of behaviors. The High-grade MEC is a highly aggressive tumor and low-grade counterpart usually more benign nature [7]. The prognosis of MEC depends on the clinical stage and histological grade [4]. The treatment of MEC is surgical resection and postoperative radiotherapy which

seem to be efficient to achieve local and regional control of the disease [6].

CASE REPORT

72 years old male patient came to us with the chief complaint of a painless swelling in the palate since 5 years. It is not associated with any pain or discharge. His medical and family histories were non contributory. Patient was in good physical condition. Extra oral examination was unremarkable. On intraoral examination a swelling of size 2 cm x 1.5 cm approximately; slightly bluish in middle part of the lesion was seen in the palate slightly Right to the midline (Figure-1). Mucosa over the swelling is normal without any ulceration. On palpation it is nontender, firm to soft and cystic in consistency, noncompressible & pulsatile with slightly indurated borders. Aspiration yielded bloody aspirate and it caused collapsing of the lesion, which regained its size within 1 to 2 minutes. Initial clinical diagnosis of vascular lesion with differential diagnosis of minor salivary gland malignancy was made.

Color Doppler study indicated possibility of a low flow malformation. C.T. scan revealed well defined, centrally hypodense, enhancing lesion seen involving hard palate on the right side, possibility of benign lesion ruling out presence of a vascular lesion and diagnosed it as a minor salivary gland tumor (Fig-2). His hematological parameters were in normal Limits.



Fig-1: Preoperative

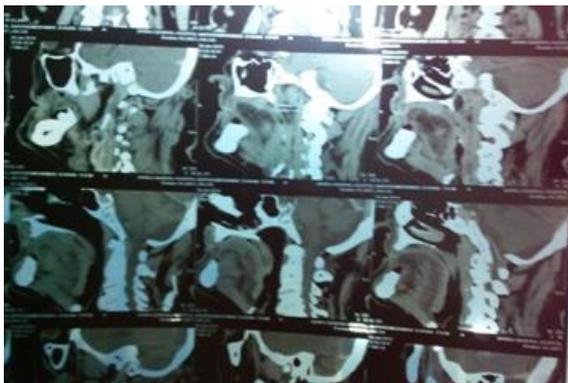


Fig-2: CT scan showing lesions



Fig-3: Intra Operative



Fig-4: Immediate closure



Fig-5: Follow up after 2 years

The treatment plan consisted of surgical resection of the lesion involving 0.5 cms of the normal bone. Crestal incision was given and on surgical exposure the greater palatine artery was encountered, which was kept intact without any damage to it (Fig-3). Any sharp bony edges were trimmed; primary closure was done with 3-0 silk sutures (Fig-4). Postoperative healing was uneventful. Follow-up of two years did not show any recurrence (Fig-5).

Histological examination shows uniform sheet of tumour cells showing high cellularity. There is presence of scanty fibrocellular collagenous component encircling the tumour cells. Tumour cells are showing light and darkly stained population of intermediate epidermoid cells along with the larger cells with foamy cytoplasm suggestive of mucous cell. Tumour cells are showing lots of pleomorphism and mitotic figures and presence of nucleoli within the nucleus. Mucous cells component is very less and tumour mass appears to be solid sheet of proliferative intermediate and epidermoid cells. There is very scanty stromal component is seen. Features are suggestive of intermediate grade of mucoepidermoid carcinoma.

DISCUSSION

MEC was first described by Massao and Berger in 1942. MEC of salivary gland arises from pluripotent reserve cells of excretory ducts which differentiates into columnar, mucous, squamous cells [9].

Clinically, the majority of palatal MEC appears as firm swellings and may resemble vascular lesions or mucoceles. The mucosa of palatal tumors can be papillary and the cortical bone may display superficial erosion. The swelling usually are painless & symptoms can include paresthesia, dysphagia, and bleeding [4].

Low-grade MEC macroscopically are small and partially encapsulated. Microscopically characterized by the presence of more mucous-producing cells [4]. Prominent cystic structures lined by mature mucous, intermediate, or epidermoid cells are the hallmark of these tumors. Solid areas are not evident and prominent fibrous stroma often is present [4]. Low

grade MEC grows in a well-circumscribed manner, without small infiltrative islands at the tumor border.

Intermediate comprises of solid than cystic architect with more intermediate cells. These cells are capable of differentiating into mucous or epidermoid cells [2].

The high grade tumors consist of epithelial cells, with very few mucinous cells [1]. They are less likely to demonstrate a capsule because of rapid growth and local tissue invasion. Distant metastasis implicates an unfavorable prognosis but behaviour of the metastatic deposits has a slow progression [1]. When distant metastases develops the average survival is 2.3 years for minor salivary gland tumors and 2.6 years is for tumors of the major salivary glands. The lung is the most commonly involved site of metastasis.

For the MECs, the histopathological stages are to be associated with the clinical findings (symptomatic / asymptomatic, rapid or slow development, the clinical staging T1 –T4, the location of the tumor, in the palate, in the floor of the mouth), before any treatment decisions are made. Complete surgical excision remains main modality of treatment for MEC [10].

The treatment of low-grade MECs is complete, wide surgical resection of the tumor with free surgical margins [4]. High grade requires wide surgical excision, neck dissection and post operative loco-regional disease control [6]. MEC has been considered a radio resistant tumor so postoperative radiation is effective [7-11].

In our case, surgical excision of the lesion was done along with bony margin, healing was good, proper suturing after surgical resection has increased the function and outcomes of the patient. There was no evidence of any recurrence after 2 years.

Most recurrences occur within 1 year and occur rapidly in high grade up to 60% of patient. Local recurrence is low. Survival rates are 24% for high grade, 92% for low grade, and 83% for intermediate [12].

CONCLUSION

Mucoepidermoid carcinoma is the most common malignant salivary gland carcinoma involving minor salivary glands. It has the appearance of bluish dome shaped swelling and can be confused with hemangiomas or mucoceles.

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