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LOW GRADE MUCOEPIDERMOID CARCINOMA OF PAROTID GLAND: A CASE REPORT

Oncology

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ABSTRACT

Mucoepidermoid carcinoma is the most common salivary gland malignancies, accounting for 1% to2% of major salivary gland neoplasm. It is most commonly seen within the parotid gland and typically seems as symptomless swelling. The aim of this case report is to discuss clinical manifestation, diagnosis and treatment plan of MEC of the parotid gland. A case of MEC in a 55 years old female patient who presented with a painless firm fluctuant swelling in left preauricular region. The lesion was examined clinical, histopathological and investigations were carried out. FNAC was done for the lesion and report confirmed tumour of the parotid gland. Superficial parotidectomy was done with adjacent free margins, taking care not to injury the branches of facial nerve. Post recovery was uneventful with no defect of facial nerve function. This case report highlights the need for proper diagnosis and treatment plan in the cases of malignant tumours.

KEYWORDS

Mucoepidermoid carcinoma, salivary gland neoplasm, superficial parotidectomy.

INTRODUCTION-

Mucoepidermoid carcinoma (MEC) is the most frequently occurring type, accounts for <10% of all tumours of the salivary gland and approximately 40% of MECs are found in parotid gland [1,2]. As its name suggests, MEC is composed of mucus producing, squamous, and intermediate type cells[3]. In 1942, MEC was 1st reported by Massao and Berger and by stewart et al.in 1945 as a distinct pathologic entity [4]. It occurs most commonly in adults during the fifth and sixth decades of life. There is a ratio of women to men of 3:2 with an average age of onset around 48[5]. Due to the relative rarity of tumours and the remarkable variability in their biological behaviour; there are differences of opinion about appropriate classification, grading and treatment[6, 7]. Histologically, it is classified into low, intermediate and high grade[8]. The extent of parotidectomy and indications for neck dissection are not clear, but surgery is widely accepted as a primary treatment for MEC [9].

Case Report-

A 55 year old female presented with a 2 month history of swelling in her left preauricular region. The swelling was painless firm fluctuant and had gradually grown to its current size. Her past medical, dental, social and family history was unremarkable. On physical examination, a firm 3cm mass palpated at the left preauricular region. No lymphadenopathy was present and all facial nerve function was intact. (Figure 1) Routine blood test findings were within normal limits. Findings on fine-needle aspirations were diagnostic.

Microscopic examination of the lesion revealed moderately celluar smears show clusters of epithelial cells having round to oval eccentrically placed nuclei and moderate amount of cytoplasm. Mild anisonucleosis is noted. The background shows myxoid material. Scattered foamy macrophages and polymorphs noted.

The patient was posted for a left superficial parotidectomy after obtaining appropriate consent.

Procedure-

Anaesthesia- General anesthesia was achieved by rapid intubation sequence and endotracheal intubation. Local anesthesia (1% lidocaine with 1:80,000 adrenaline) has been given. Subcutaneous injection of anaesthetic is administered throughout the entire field of operation.

Incision- A modified blair incision was given. The incision was taken in preauricular skin crease. The skin flap was raised to superior, inferior, anterior and posterior border of gland. The flap was raised under the periparotid fascia. The fascia was included in the skin flap and gland tissues were exposed. Blunt dissection with haemostat was done and posterior border of gland was exposed. (Figure 2)

Dissection of facial nerve and resection of the gland- Posterior belly of digastric and tragal pointer were used as landmark for identification of main trunk of facial nerve. Once main trunk of facial nerve identified dissection was done using fine tipped haemostats to create tunnels in tissue immediately above the nerve. The bridges of parotid tissue over the nerve are gently cut with a scalpel blade. Great care was exercised to avoid inadvertent entry into the tumour during preservation of the facial nerve. As the terminal branches of facial nerve completely exposed, gland was resected with tumour. The superficial parotidectomy was excised with the tumour. (Figure 3) The specimen was sent for histopathological examination. (Figure 4)

After removal of tumour, wound was irrigated with saline and the integrity of the facial nerve was checked. Haemostasis achieved, platysma muscle and subcutaneous tissue were closed with absorbable sutures. Skin incision was closed with non-absorbable sutures. Closed suction drainage with external pressure by gauze was maintained for 3days.

The sutures were removed 1 week after surgery. After a 1 year follow up, prognosis was excellent and the patient was lesion free and under periodic review.

DISCUSSION-

Surgical resection is the mainstay of treatment for salivary gland tumours, in general, and mucoepidermoid carcinomas, in particular. In the case of intermediate or high grade MEC, adjuvant radiotherapy appears to aid in local control in cases of advanced staging, close or positive surgical margins, high grade histology, perineural invasion. In the case of low grade disease, the indications are less clear; low grade disease has traditionally been treated with surgical resection alone[10]. In our case report, patient with low grade MEC was treated with surgical resection alone. There was no evidence of lymphovascular invasion and surgical margins were cleared. The role of radiation therapy in treatment of malignant salivary gland tumours was examined by Terhaard et al. and while surgery alone was commonly recommended for MEC, postoperative radiation improved 10year local control for patients with advanced T stage tumours (T3 and T4), close or positive surgical margins or perineural invasion [11].

Indications for the treatment of the neck, particularly in patients with clinically negative lymph nodes (N0) remain unclear. Traditionally, the strongest predictors for occult lymph node metastasis in a clinically N0 patients have been tumour histology, pathological grade, tumour size and site of disease [12]. A retrospective study of 119 patients with clinically N0 salivary gland carcinoma was performed by Lau et al, suggested that elective neck irradiation would not likely benefit to patients with low grade disease[13]. Currently, several strategies are

accepted for management of the clinically N0 neck of patients with salivary gland carcinomas including elective neck dissection, close observation and elective neck irradiation[12]. In our case report, direct treatment of the neck was not performed. Armstrong et al. also suggested that patients with small low grade tumours were considered to have a minimal risk of occult nodal disease, making elective neck treatment unnecessary[14].

Ozawa et al. concluded that standard treatment for MEC is surgical resection with adequate margins. They stated that cases that have a high risk recurrence due to a close margins or histologic intermediate or high grade need to undergo postoperative radiotherapy[15].

CONCLUSION-

MECs display a variety of biological behaviours and a variable nature history. It appears to be a treatable disease, according to literature. Surgical resection is treatment option for low grade tumours, while more advanced and high grade tumours require surgical resection with neck dissection. Postoperative radiotherapy is given that case such as advanced disease and tumours with positive surgical margins. The prognosis of MEC is in a great relation on not only the tumour stage, but also the histological grade of the tumour. Whatever the treatment modality, patient with MEC should be followed up closely for life to prevent late recurrence.

Images-

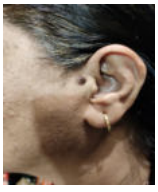

Figure 1: Tumor mass on left preauricular region

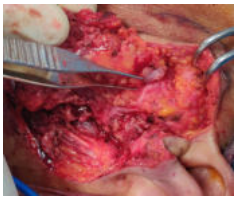

Figure 2: Incision and dissection of facial nerve

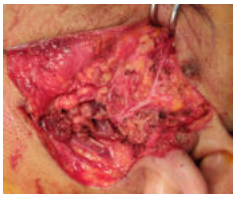

Figure 3: Superficial paritodectomy with preservation of facial nerve

Figure 4: Tumour specimen

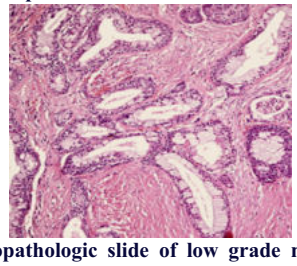

Figure 5: Histopathologic slide of low grade mucoepidermoid carcinoma of thel left parotid gland

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