Case Report

GIANT MUCOEPIDERMOID CARCINOMA: A CASE REPORT

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ABSTRACT

Objective: *Mucoepidermoid carcinoma is the most common malignant salivary gland tumor. It is the frequent presentation of parotid gland, usually presented as small painless swelling and mostly diagnosed histologically. A 54 year male presented with huge ulcerated mass on right side of face with cutaneous involvement. The mass was exophytic cauliflower like and locally invasive. Surgery was performed and defect was reconstructed with supraclavicular flap. We presented this case due to its large size and subsequent challenging resection.*

Key words: *Giant mucoepidermoid, Supraclavicular flap, Parotid Gland .*

INTRODUCTION

Mucoepidermoid carcinoma (MEC) is the most common malignant neoplasm of salivary glands[1].In parotid gland, Mucoepidermoid carcinoma accounts for 30% of parotid malignancies[2]. Pluripotent reserve cells of the excretory ducts have capacity of differentiating into squamous, columnar, and mucous cells and it is believed that these duct cells are the culprit of Mucoepidermoid carcinoma[3]. Prevalence is highest in 3rd to 6th decade of life with equal gender distribution but fifth decade has frequent presentation[1]. High grade is the most malignant while low grade represents a benign nature of malignancy[4].

The head and neck tumors, especially malignancies are uniquely challenging as a wide resection creates a defect and therefore goal of reconstructive surgical procedures after tumor ablation in the head and neck is not only to cover the created defect but also to design an anatomical, functional as well as esthetic unit in which the recipient sites will have same skin color and textures like donor site[5]. Supraclavicular artery flap (SCAP) is also considered first line for head and neck reconstruction. This is a fasciocutaneous flap which is a safe, relatively simple to raise, thin, less bulkier, reliable, have low donor site morbidity and have good colour and texture resemblance with the facial skin[6].

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We presented this case because we have not encountered such a huge MEC. High grade MEC itself requires a wide resection therefore tumor of such size with additional wide resection poses difficulty for reconstruction, which was successfully done with supraclavicular flap. The goal to reconstruct an esthetic as well as functional unit after tumor ablation is the main concern which limits the resection[5].The flap is needed which not only provide coverage but also have same colour and texture to recipient site as face is the main medium for social interaction.

CASE REPORT

A 42 year old male presented with a 1 year history of lesion on right side of face. According to the patient he had a small swelling 1 year back which was increasing on each passing day. Later it ruptured and became exophytic mass. There was history of bleeding but no associated pain. Patient speech was normal, no masticatory difficulty or swelling intraorally. He was afebrile and there was no past significant medical or surgical history. He had no habits of smoking and paan chewing. Incisional biopsy was taken and was reported to be mucoepidermoid carcinoma. As he was not operated due to large dimension of lesion in pervious department, He visited to the Department of Oral and Maxillofacial Surgery, Mayo Hospital.

On examination a thin lean male was sitting anxiously with an anemic look, having irregular exophytic cauliflower mass of 6x10 cm growth on right side of face. Mass was stained with blood with yellow colored base. There was fluid discharge with foul smell.

Fig - 1: Pre Operative, Mucoepidermoid Carcinoma

Fig - 2: Intra Operative, Excision and Supraclavicular Flap

Fig - 3: One Month Post Operative reconstruction

Anteriorly starting from the mid of cheek extended posteriorly 3 cm behind right earlobe, involving the mandible inferiorly. There was bleeding on slight manipulation. Intraoral examination was insignificant as well as facial nerve was intact. Lymph nodes were palpable at level 2 and level 1B. Basic laboratory investigations, screeing, urine analysis, renal function test, liver function test, abdominal ultrasonography, chest radiograh, coagulation profile were normal. In complete blood count there was leucocytosis with raised neutrophils, and hemoglobin concentration of 4.2 g/dl. Due to chronic blood loss from lesion Hemoglobin concentration gone down and the main challenge was to bulid up the hemoglobin concentration. Multiple transfusions were done and hemoglobin concentration was developed up to 10.9g/dl. Biopsy was taken again for confirmation and specimen was sent for immunohistochemistry for markers. Patient was referred to Radiology Department for CT-Scan and MRI and showed the superficial nature of lesion with involvement of right parotid gland. Morbidty and mortality was discussed with the patient as well as with attendants.

Patient preparations were made and Blood cross matching was done once again and 3 pint of blood was arranged. Tumor was resected along with safe margins. Parotid gland was identified and attempt was made to spare the facial nerve but due to extensive involvement of the nerve it was not possible. Total parotidectomy along with facial nerve was done. Part of ear involved was also removed. Peripheral skin margins were secured with silk and hemostasis achieved. Supreomohyoid neck dissection done and level 1b and level 11 lymph nodes were removed.

For supraclavicular flap triangle was marked bordered by sternocleadomastoid, clavicle and external jagular vein. Measurement were made for flap and marked all around, elevated and secured to the recipient site. Donor site was covered with skin graft.

DISCUSSION

Mucoepidermoid carcinoma is the most common malignant neoplasm in major and minor salivary glands[1], accounts for 30% in parotid gland[2].It is thought to arise from epithelial ductal cells. In Pakistan prevalence of MEC reported to be 9.5 % to 25.6% among salivary gland tumors as compared to 12-40% worldwide[3]. Histologically garded into Low, Intermediate and High grade. Auclair et al and Goode et al

described a reproducible histological grading scoring system for MEC,low grade, intermediate grade and high grade malignancy.Intracystic component, mitosis,neural invasion, necrosis, anaplasia were histological findings taken into consideration for grading[4]. Wide Surgical excision is the treatment of choice in low grade MEC where as in case of high grade MEC wide surgical excision, neck dissection and post surgical radiation is required[3]. Overall 5 year survival rate in low grade MEC without nodal or distant metastasis is 75-95% while in high grade MEC with lymph node involvement at time of diagnosis is only 5%. Overall 10 year survival rate is 50%[7]. In this case surgical excision along with total parotidectomy, supraomohyoid neck dissection was done and patient was referred for post surgical radiations.

Large head and neck tumors especially malignant tumors pose a difficult situation for recipient site reconstruction and wide excision in most of cases is challenging. Flaps around the shoulder are considered best for tissue loss of the face and neck, as donor site has similar colour and texture to recipient site. As early, 1842, Mutter was the first to introduce shoulder flaps. The axial pattern flap based on supraclavicular artery of the shoulder was first described by Lamberty. Failures were reported later and remain absent in literature for prolong period of time[5]. In the 1996, Pallua et al rediscovered this flap[8].Supraclavicular flap has been used in post burn contractures[9].Shoulder area is easily concealable therefore flaps taken in these areas are the best for orofaical and cervical reconstruction. The patient we received had tumor size of 6x10cm needed an esthetic and functional flap with less morbidity and excellent final results. Malignant tumors requiring excision of normal tissues along with malignant tissues pose a challenging surgery. Prolonged duration of microvascular surgery, poor nutritional status, advance age as well as poor medical condition (in our case chronic blood loss), the need of expertise, specialized equipments, increased hospital stay limits the use of free flaps. Therefore regional flaps remained best especially the shoulder area having good final esthetic results. Comparing to the regional flaps pectoralis major flap is much bulkier then SCF. Adaptation of Latimmus dorsi or trapezius flap is very cumbersome and time consuming. In case of pectoralis major flap or Latimmus dorsi flap sometimes the pedicled is compressed against the medial bordor of mandible compromising vascularity[5]. Supraclavicular flap is a fasciocuntanous flap which is based upon supraclavicular artery, branch of Transverse cervical artery. Pallua conducted a study and showed origion of supraclavicular artery found to be 100% in in this triangle formed by external jugular vein posteriorly, dorsal edge of the sternocleidomastoid muscle anteriorly and the medial part of the clavicle forming the base of this triangle.This artery, diameter of 1.0-1.5 mm, exits 3cm above the clavicle, 2cm dorsal to sternocleidomastoid and 8cm from sternoclavicular joint. Two veins draining the flap. One ranging from 0.4-1.0 mm diameter drains either into external jagular vein or subclavian vein. Other having diameter range of 0.8-1.6 mm draining into transverse cervical vein[5,9,10]. A study conducted on 50 patients for head and neck reconstruction by Sandu et al showed a high success, good esthetics result, easy and quick to harvest, single stage and wide arc of rotation as compared to Deltopectoral. They also advocated 100% flap survival with excellent wound healing[5]. Chiu et al[l8] reported using the supraclavicular island flap in 18 patients requiring oncologic head and neck reconstruction. In this study, one patient (5%) had complete flap necrosis and four had minor recipient site complications which were treated by local conservative treatment. In case series conducted upon 50 patients by Sandu et al[5], the average SCF dimensions were approximately 6×17 cm, though flaps up to 11×21 cm have been harvested with good results. In this series it was also advocated that high facial reconstruction in needed delayed procedure can also be performed prior to surgical intervention which can give additional 3-4cm of length. In agreement with multiple studies conducted, a dimension of 6×21 cm of flap can be raised.

Flap have multiple advantages of being easy and quick to harvest, light weight, good color matching, wide arc of rotation, less donor site morbidity, simple technique, long length. Color matching decrease the anxiety of patient being face is a medium for social interaction. Therefore we recommend Supra clavicular flap should be considered in first line for orofacial reconstruction. Flap which was for a long time ignored in literature, should be given due importance for reconstruction after tumor ablation.

CONCLUSION

MEC is the common malignancy found in parotid gland. High grade malignancy with secondary cutaneous involvement, huge tumor limits the resec-

tion and reconstruction. Considering the high visibility and medium of social interaction along with the high cosmetic requirements of the head and neck we can conclude that supraclavicular flap should be considered as first line for head and neck reconstruction.

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