



TEMPORALIS FLAP WITH ORBIT EXENTERATION IN CASE OF RECURRENT BASAL CELL CARCINOMA OF LOWER EYE LID.

Surgery

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KEYWORDS

INTRODUCTION -

Basal cell carcinoma (BCC) is the most common type of skin cancer (1). It constitutes approximately 70 to 80% of all malignant skin tumors, it is usually a slow-growing tumor with only minimal metastatic potential, some types can grow aggressively from the start and infiltrate surrounding tissues and deeper structure in a fashion that may not be obvious on visual inspection (2). BCC relapses and recurrences are problems in patient follow-up, especially when a graft and flap is required to close the surgical wound (1). Although aggressive histological types and positive excision margins are considered the strongest predictors of recurrence (2). Exenteration is considered in the case of extensive orbital invasion or high-risk aggressive tumours in order to reduce the rate of recurrence (3).

Total surgical excision is still considered the "gold standard." (2). Tumor recurrences are problems and great challenges for patient follow-up, especially when it is necessary to perform more complex surgeries to close the surgical wound (1). BCC with orbital invasion is uncommon, with a reported incidence of only 1.6%–2.5% (3). Several methods are available for reconstructing the defect resulting from exenteration, ranging from cavity healing with granulation tissue to the use of microsurgical flaps to reconstruct the cavity (4), however here we describe the use of the temporalis muscle flap to reconstruct the orbital exenteration cavity.

Case Report-

A 80 year old female with no known comorbidities noticed a nodule over his right cheek which was insidious in onset gradually in progressive nature since 6 years and was diagnosed as case of Basal Cell Carcinoma for which Wide Local Excision with Rhomboid flap was done in 2018, after 1 year of the post operative period she again developed a similar lesion over the right cheek associated with discharge from it, associated with vision loss in the right eye. On examination vitally stable. Local examination revealed a 6x7cm ulcerative growth over right cheek extending to eye with irregular edges, no bleeding or discharge with a necrotic patch. The growth was grossly found to be infiltrating the palpebral conjunctiva associated with cataract and poor vision in the right eye for which an ophthalmology reference was taken in view of conservation of the eye but was advised that vision cannot be salvaged and hence decision regarding exenteration was taken. All laboratory investigations were within normal limit and biopsy was suggestive of recurrence of Basal Cell Carcinoma.

MRI orbit was suggestive of Focal area of subcutaneous soft tissue thickening and enhancement seen in the inferior margin of the right orbit measuring approx. 1.2 X 1.5 cm. Adjacent fat planes are normal. No extension of the soft tissue in the right orbit or the maxillary sinus. Right orbit exenteration with temporalis flap and skin grafting was done as the ulcerative lesion was seen involving the lower eyelid reaching up to sclera conjunctival close to the eyeball. Along with this excision of benign lesion over the scalp was also done. Post-operative period was uneventful. Histopathology report was suggestive of Basal

Cell Carcinoma with squamous differentiation involving the lower eyelid and palpebral conjunctiva. Patient is on regular follow up with 100% graft uptake and healthy flap with no signs of recurrence.

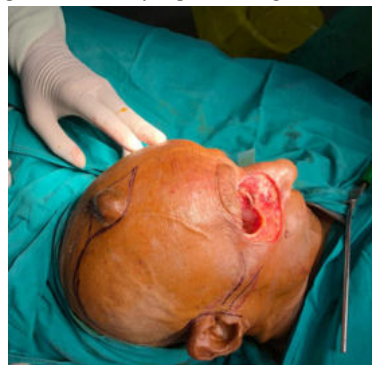


Figure 1 – intraoperative image post exenteration with temporalis flap marking



Figure 2– Post exenteration



Figure 3- Harvesting the temporalis muscle flap with anterior and posterior deep temporal arteries.



Figure 4- Post transposition of the flap



Figure 5- On follow up after 1 month

DISCUSSION-

Recurrences of BCC range from 4% to 16.6%, but do not separate between the cases with recurrence by primary closure from those requiring more complex reconstructions. The present study showed a predominance of lesions in the cephalic segment ($p < 0.05$), the most common site of BCC according to the literature, in view of the greater exposure and cumulative effect of solar rays (1). The nodular histopathological type predominated in the study (85 lesions, 73.28%), in accordance with other studies.^{2,8} The micronodular and sclerodermiform subtypes considered as aggressive forms 8,11,12 accounted for 20 lesions (17.24%), and were associated to recurrences ($p < 0.05$) (1). Many therapeutic alternatives are available for this cancer, but total surgical excision is still considered the “gold standard” (2). The decision to perform orbital exenteration when orbital involvement is deemed difficult. Invasion of the fat and muscles of the orbital apex and infiltration of the conjunctiva or sclera are absolute indications for orbital exenteration (4). Also primary reconstruction is performed during the initial exenteration operation. It promotes healing, provides a better aesthetic appearance, and enables activities such as bathing, but it can hide recurrences.

The most common complication is a defect in the temporal region. With most local and free flaps, donor defects can occur, affecting the patient's aesthetic appearance. In our case, the flaps were prepared from part of the temporalis muscle, which prevents a donor defect. Almost all BCCs are curable if diagnosed and treated promptly (2).

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