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Basal Cell Carcinoma of Lower Eyelid with Orbital Invasion

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ABSTRACT

Basal Cell Carcinoma (BCC) is most common malignant eyelid tumor in the Caucasian population and common skin cancer in white-skinned individuals but rare in colored and Indians. Ultraviolet radiation is one of the risk factors of BCC. Around 50% of BCC of the eyelid presented with the lower lid involvement. Histopathology still stand as gold standard investigative procedure to diagnose basal cell carcinoma. Still surgery is the ultimate choice of treatment. Careful eyelid reconstruction should be considered as both functional and aesthetic outcome. In the case of extensive orbital invasion or high-risk aggressive tumors, exenteration reduce the rate of recurrence.

KEYWORDS

Basal cell carcinoma; Eyelid; Orbit

1. INTRODUCTION

Basal cell carcinoma (BCC) is one of the most common types of cancer and is generally localized on facial skin that has been exposed to the sun [1]. BCC constitutes 90% of malignant eyelid tumors, with a slight male preponderance [2]. BCC with orbital invasion is uncommon, with very low reporting [3]. Beside the nodular type (60% - 80%) and others, meta-typical BCC is characterized by an increased risk for transformation into squamous cell carcinoma (SCC) [4]. Distant metastases or those in the lymph nodes are rare with poor prognosis. A tumor larger than 3 mm seems to be a relevant risk factor for metastases from BCC, particularly in bone which have been described in few single case studies [1-5]. BCC frequently occurs in the elderly population. BCC is more common in men than in women, with a male-to-female ratio of approximately 2:1 [6]. Major risk factors for BCC include UV radiation exposure, fair pigmentary characteristics (fair skin color, red hair), old age, Geno dermatoses, a family history of BCC and immunosuppression.

2. CASE REPORT

A 50-year-old female, housewife, reported in October 2019 with a slow growing ulcerative lesion of the right lower lid for fourteen years. The patient state that the lesion is increasing in size and occasional bleeding from it. She had a history of surgery eleven years back with skin graft for

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aesthetic purpose. Histological examination was done and reported as basal cell carcinoma. After excision, the lesion recurred again in the same place, continued to increase in size and occasional bleeding.

Examination revealed a painless, 5 cm × 2 cm ulcerative lesion involving the whole right lower eyelid, extended over the skin of right lateral wall of the nose, infraorbital rim area and both the angle of right eye. The ulcer shows rolled borders and hemorrhagic crust. The lesion was firmly adherent to the underlying structures and restricted the active movement of eyeball. Eyeball was sunken, fixed and with loss of vision. Inferiorly it extends up to right ala of nose. Clinically, there was no lymphadenopathy.

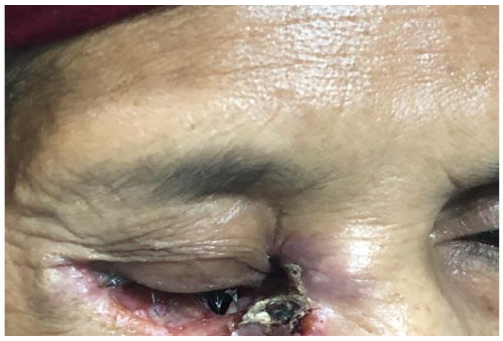

Figure 1: Pre-operative picture of patient represents the extension of lesion.

Routine investigation reveals Hb-8.8 gm/dl suggesting moderately anemic. Chest x-ray and ultrasonography did not reveal any abnormality. Systemic examination was unremarkable. A clinical diagnosis of basal cell carcinoma was made. No family member had history of skin cancer.

CT scan of the maxillofacial region showed Infiltrative enhancing soft tissue lesion at right side of nasal cavity, right maxillary sinus and anterior groups of right sided ethmoidal air cells. The lesion causing destruction of the surrounding bones (right nasal bone), anterior wall of the right maxillary sinus, frontal process of right maxilla and medial wall of orbit. Extension of the lesion is seen into the inferomedial aspect of the right orbit. Anteriorly the lesion extended into the right side of the ala of the nose and right nasolabial fold.

Figure 2: Computed tomography in 3D and coronal view representing the involvement of maxilla, ethmoid, nasal bone and the orbit.

3. TREATMENT

Clinically, a rough estimate of tumor margins was made with the skin of the right lower eyelid using the following guides - altered skin color; tumor depth was judged by the lesion's mobility over underlying tissues. Wide excision and eyeball exenteration had been done. Partial maxillectomy, right nasal bone, part of zygomatic bone and ethmoid bone was removed. right frontal sinus lining was also removed. Standard surgical excision with one cm healthy margin was done. Reconstruction had been done with Antero - Lateral Thigh (ALT) microvascular flap and frontal sinus obliteration was done with muscle of this flap.

Figure 3: Represents the marking of involved tissue and one-centimeter healthy margin of excision.

Figure 4: Represent the defect after total excision.

Figure 5: Reconstruction of defect by ALT flap.

4. HISTOLOGY

Histopathology revealed BCC with bony invasion and inflammatory infiltration into the ethmoid sinus. The deep and peripheral margins are free of tumor.

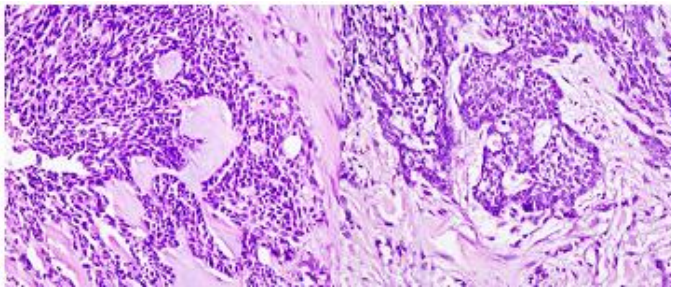

Figure 6: Histological representation of lesion after excision.

5. DISCUSSION

The lower eyelid and medial canthus are the most frequent sites of the origin of BCC [7]. Exposure to ultraviolet radiation has been well established as the main risk factor for developing both melanoma and non-melanoma skin cancers [8]. It is likely that the main risk factors for the presentation of BCC are the patient's fair complexion and regular exposure to higher levels of UV radiation as she worked regularly for agricultural site [9]. The reappears to be no difference between continuous exposure and intermittent exposure to UV radiation in developing non-melanoma skin cancer [10]. Forty percent of patients with BCC have an increased risk of developing second skin cancers, in five years [11]. In our patient, a second lesion appeared eight years after the removal of first lesion.

Though the incidence of BCC is high, but its pattern is not aggressive. Although it can be locally invasive and destructive, it rarely metastasizes and is readily amenable to excisional management. However, facial BCC is particularly concerning, Because of its presence in a cosmetically delicate area and its higher recurrence rate. Therefore, appropriate diagnosis and therapy are essential.

Superficial spreading basal cell carcinoma also has intermittent regions of normal skin, forming classic "skip regions." It is also known as "multicentric" or "multifocal" BCC for this reason. Importantly, this unique characteristic makes it difficult to accurately assess the tumor borders after surgical resection with negative margins. Surgical Excision is the first treatment option for BCC. Mohs micrographic surgery is the therapeutic modality of choice for primary and high-risk facial BCCs [12].

In our patient, it was black-pigmented Nodulo-ulcerative type of BCC according to the history. Nodulo-ulcerative type results from central ulceration of nodule. It is surrounded by rolled up borders, often described as Rodent ulcer. Histopathological examination and subtyping of all BCC tumors is recommended [13]. Differential diagnosis of BCC are other malignant lesions.

6. CONCLUSION

Though the UV radiation is the prime causative factor of basal cell carcinoma (BCC). Careful planning of outdoor activities by selective time on the basis of sun ray, wearing a broad-brimmed hat during outdoor activities, and using sunscreens with sun protection factor of 30 or higher can reduces the incidence of BCC.

Basal cell carcinoma of the face is a surgical challenge due to its location, recurrence, and its disseminating pattern. Lesion of this patient involves the eye, nose and cheek aesthetic units of the face.so patient need strong mental strength to except the postoperative outcome.

Single case with the typical clinical presentation is the weakness of the article. Different or atypical presentations would have been good for the judging the variance of clinical signs and symptoms. But the case in a colored population made us interested to present in the global arena, is the strength of the article.

7. CONFLICT OF INTEREST

No conflicts of interest to declare.

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