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Case report

A rare case report of eyelid basal cell carcinoma with special emphasis on its unusual presentation and role of radiotherapy as its treatment options

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ABSTRACT

Basal cell carcinoma (BCC) is the most common type of skin cancer in white-skinned individuals but is rare in blacks and Indians. Skin cancers mainly affect sun-exposed areas like the neck and face (88-90%). BCC rarely metastasizes or kills, but is still considered as malignant because it can cause significant destruction and disfigurement by invading surrounding tissues. Here we present a case of BCC appearing in upper eyelid at the eyebrow region which is very rare to cite in literature. The patient was a resident of high altitude with no evidence of local invasion or distant metastasis for which she was treated with radiation therapy. Radiation therapy is a good therapeutic option in patients who are unwilling for surgery and in those requiring extensive surgery. BCC is usually not fatal, but early diagnosis and appropriate treatment promises better functionality and esthetic outcome.

Keywords: Basal cell carcinoma, Eyelid, Radiation therapy, Ulcer

INTRODUCTION

Basal cell carcinoma (BCC) is the most common cancer in the world. Eighty percent of BCCs occur in the head and neck region, of which 20% occur on the eyelids. BCC constitutes 90% of malignant eyelid tumors, with a slight male preponderance.[1] BCC with orbital invasion is uncommon, with a reported incidence of only 1.6%–2.5%. The age of tumor emergence is typically 60–80 years. Although metastasis is rare, BCC of the eyelids has a high risk of recurrence.[2] BCC rarely metastasizes or kills, but is still considered as malignant because it can cause significant destruction and disfigurement by invading surrounding tissues.

Here, we present a rare case of BCC appearing in the left supra-orbital region as a ulcerated lesion occupying the upper eyelid region, in a female of 75 years who is a resident of the hilly region of mahadevpur, Arunachal Pradesh, India.

CASE REPORT

A 75 year old female patient, field worker, resident of hilly areas of Mahadevpur, Arunachal Pradesh, reported on February 2020 in the Ophthalmology OPD with a gradual enlarging ulcer on the upper part of the left upper eyelid for last five years **(**Figure 1).

It first started as a small swelling at the lateral part of the left eyebrow five years back. It developed spontaneously with no history of trauma. For years, it looked like a scaly red elevated mark on the skin for which she took local medication, but neither the lesion resolved completely nor it increased in size and shape. It bled occasionally and resolved on its own, however the lesion did not heal completely.

However in last one year the attendent complained that the lesion took a different look in last few months. The mass gradually increased in size forming a raw area over left upper eyelid in almost six months which increased to the present size prior to presentation.

Figure 1: Patient at first visit.

However it was painless, with no profuse discharge and itchy at times. No history of any other systemic illness and family history of skin carcinoma was also negative.

On examination of left eye

- Visual acuity: 6/18, N8
- Pupil : normal
- Colour vision : Normal
- Eyebrows : Ulcer over the eyebrow region extending in all quadrants
- Eyelid : Ulcer over the superior area of upper eyelid
- Eyelashes : Normal

On examination of ulcer

- Size : 7 cm x 5 cm
- Shape : Irregular in size and shape
- Number : One
- Location : In the region of left eyebrow and upper part of left upper eyelid
- Edge : Raised beaded edge
- Floor : Moderate sloughing
- Pigmentation present
- Discharge : Scanty serous discharge
- Surrounding area : Loss of cutaneous wrinkles
- Tenderness: Present
- Margin: Irregular and marked indurated edge
- Base : Bony surface
- Depth : 2 mm
- Bleeding : Scanty
- Relation to the surrounding structures: Adherent to the underlying structures and mild retraction of the upper eyelid.
- Lymph nodes: Not papable.
- No neurological deficit noted.

The anterior and posterior segment of both the eyes were normal with no significant findings. Systemic examination was unremarkable (Figure 2).

Routine investigation revealed normal blood sugar levels, a normal hemogram, liver and kidney function tests. Chest X-ray, CT brain with orbit and ultrasonography of abdomen did not reveal any abnormality.

Figure 2: Examination of ulcer (arrow raised beaded edges).

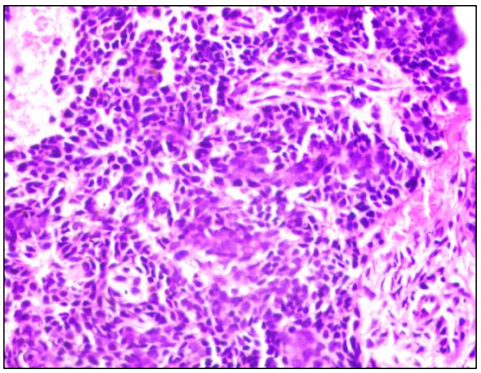

Figure 3: Histopathological section of tissue with tumour cells mild nuclear polymorphism and hyperchromatic nuclei.

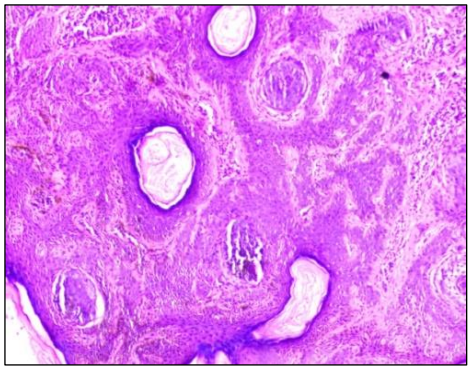

Figure 4: Histopathological section of tissue tumour cells arranged in nests with peripheral palisading.

Histopathology

Sections from the tissue gave a picture of Basal cell carcinoma consisting of tumour cells arranged in nests with peripheral palisading. Focal areas showed a keratotic pattern showing horn cysts in the tumour nests. Focal areas also showed an adenoid pattern. The tumour cells showed mild nuclear polymorphism and hyperchromatic nuclei. Areas of melanin pigment deposition are seen. The lateral and deep resection lines are involved by tumour (Figure 3 and Figure 4).

Figure 5: Two months after treatment.

Treatment

Due to the advanced age of the patient, the considerable size of the tumor and also patients unwillingness to undergo surgery, we opted for treatment with radiation therapy. She was subjected to external beam radiation therapy. Patient received a total dose of 50 Gray over a 4 week period. The treatment was well tolerated and there were no serious adverse events. Two months after treatment, a significant improvement was found as shown in Figure 5.

DISCUSSION

BCC is the most common malignant eyelid tumor in the Caucasian population. The lower eyelid and medial canthus are the most frequent sites of origin. However, in our case the lesion was in the region of supraorbital ridge extending in all quadrants which is reported in one case report published by khullar et al.[3]

About 95% of BCC occur between the age of 40-79 years while in this case, the lesion appeared at the age of around 70 years and gradually increased in size for five years. Forty percent of patients with BCC have an increased risk of developing second skin cancers, in five years.[4] However our patient don't give any history of eruption of similar lesion in other body part in these five years tenure.

Hyde recognized UV radiation as a carcinogen, which is currently believed to be the most important cutaneous carcinogen.[5]

Our patient is also a resident of high altitude and a field worker who used to previously work out door for long hours every day. Environmental and occupational parameters might have played a role in appearance of BCC in our patient.

Clinically, BCC can be grouped into three types: nodular, nodulo-ulcerative (Rodent ulcer), superficial and morpheaform (sclerosing type). Nodular BCC is the most common variety.

However in our case it is nodulo ulcerative. Nodulo-ulcerative type results from central ulceration of nodule. It is surrounded by rolled up borders, often described as Rodent ulcer which was similar in this case.

Histopathological examination and subtyping of all BCC tumors is recommended. Its often confused with the histological picture given by a benign tumour trichoblastoma which was also similar in this case.

Treatment needs to be individualized to the patient situation, tumor characteristics and histological subtype.

The first line treatment is usually surgical excision, showing the lowest failure rates.[6] However, radiation therapy is a very effective treatment strategy, particularly for patients with primary lesions requiring difficult or extensive surgery.[7] The use of external beam radiation therapy for eyelid malignancies results in local control in 93.3-96.5% of cases. Despite these promising results, a long-term follow-up is needed due to the risk of recurrence.[8]

Similarly in this case, patient required extensive surgery considering the size of the tumour and also she refused surgery, therefore we opted for Radiation therapy following which patient showed significant improvement. Patient is now on regular follow-up.

CONCLUSION

A 75 year old female patient presenting with long standing, non-healing ulcerative lesion with beaded edges and irregular margin along the supra-orbital ridge; Basal cell carcinoma should be one of the suspects. The gold standard of diagnosis is histopathological, however CT and MRI helps in visualising soft tissue changes and rare perineural invasion.

Radiation therapy is a good therapeutic option in patients who are unwilling for surgery and in those requiring extensive surgery. BCC is usually not fatal, but early diagnosis and surgery promise better treatment outcome including functionality and esthetic outcome.

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