International Research Journal of Oncology

Volume 6, Issue 1, Page 85-89, 2023; Article no.IRJO.98278

Recurrent Malignant Melanoma Eyelid - A Case Report and Review of Literature

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/98278

Case Study

Received: 02/02/2023
Accepted: 04/04/2023
Published: 10/05/2023

ABSTRACT

Malignant Melanoma of the eyelid skin arises from the abnormal proliferation of melanocytes. It is a rare condition that accounts for < 1% of all melanomas. They are usually a result of DNA damage from exposure to UVB (290-320). Other common risk factors include Fair skin, red/blond hair, high-density freckling, light eyes (green/ hazel/blue), family history of melanoma or dysplastic nevi, immunosuppression (congenital or acquired), UVA (tanning beds, PUVA therapy). Mutations in CDKN2A, CDK4, XP, BRCA2 genes occurs in 10% of the melanoma.$_1$ Lower eyelid is the most common location of the eyelid melanoma, where it is approximately 2.6 times more likely to occur than the upper eyelid. Here we present a rare case of recurrent eyelid melanoma in a 62-year-old lady.

Keywords: Nevi; malignant melanoma; metastasis; upper eyelid; radiotherapy.

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1. INTRODUCTION

Ocular melanoma, which is much less common than cutaneous melanoma and arises from a variety of tissues, including the uvea, conjunctiva, eyelid, orbit, and lacrimal sac, differs from other forms of melanoma in terms of the characteristics of the patient, the symptoms of the illness, and the prognosis [1]. The most common histological subtype is "Lentigo maligna melanoma." Since it is exposed to more sunlight, the lower eyelid is more frequently affected. Surgery is the main form of treatment for eyelid melanoma (EM), and among the reconstruction techniques are direct closure, full thickness skin grafting, local/regional, or free flaps [2,3]. The most popular technique for preserving the globe is radiation therapy, which comprises External Beam Radiotherapy, Brachytherapy, Proton beam therapy, stereotactic radiosurgery, and stereotactic radiotherapy [4]. If applied as directed, all forms of radiation have good local cancer control and eye preservation rates [5,6]. Chances of Recurrence in Eyelid Melanomas are high. The likelihood of treatment failure increased with increasing age, tumour thickness, basal size, and proximity to the foveal avascular zone [7,8]. Most recurrences occur along the posterior edge of the tumour [9]. The first two years are when recurrences are most frequently noticed, while the subsequent five years see relatively less [10]. Recurrence and the development of metastatic disease have been reported [11]. Herein we describe a rare case of recurrent eyelid melanoma in a 62-year-old lady.

2. CASE REPORT

A 62-year-old female patienta known case of Malignant MelanomaEyelidpresented to our department with complaints of a multiple nodules under the upper eyelid with history of decreased vision and continuous watering in right eye. On examination, a nodule measuring 1x1cm noted near the inner canthus of right eye in the upper eyelid, hard in consistency, mobile, eye movements being restricted. Two sub-centimetric nodules noted in upper eyelid, mobile, non-tender. Irregularity in right bulbar conjunctiva noted. (Fig. 1). Enlarged lymph node in right pre auricular region measuring 1x1cm, hard in consistency, fixed, tender.

She had a past history of pigmented growth in the lower bulbar conjunctiva (Fig. 2) 2 years ago, was evaluated outside and underwent excision for the same. Histopathological examination showed melanoma. Patient presented with swelling in the right lower eyelid,3 weeks after the excision. Map biopsy was done and was started on injection mitomycin C 0.04% as adjuvant therapy. She was lost to follow up.

Present PET CT showed FDG avid nodular enhancing lesion in right upper eyelid, extending for a length of about 2.8cms with maximum thickness of 1cm, SUV: 7.1. FDG avid enlarged enhancing right intraparotid node is seen measuring 1.3x1cm with SUV: 11.5. She underwent right orbital exenteration with superficial parotidectomy and type III modified radical neck dissection with split skin grafting. Post operative histopathological examination revealed as malignant melanoma, epithelioid cell type. Intraparotid lymph node positive for metastatic deposit with Extranodal extension. 1/18 was positive for metastatic deposit. Pathological staging PT4aN2M0 (Stage IIIC).She was planned for adjuvant radiation therapy and she received 60 Gy in 30 fractions to primary, 66 Gy in 30 fractions to the right parotid bed and 54 Gy in 30 fractions to ipsilateral neck nodes from level I to level V. (Fig. 3) She completed the treatment uneventfully. Her vision in left eye was maintained post radiation therapy. Patient was referred for an ocular prosthesis post radiation therapy for proper cosmetic outcome.

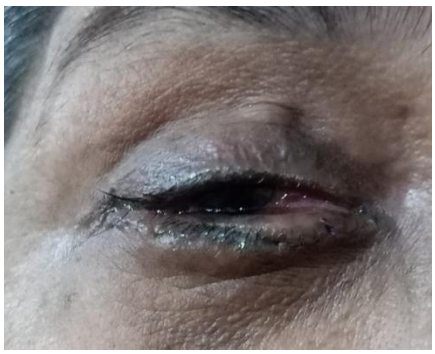

Fig. 1. Showing nodules in upper eyelid and thickening in bulbar conjunctiva

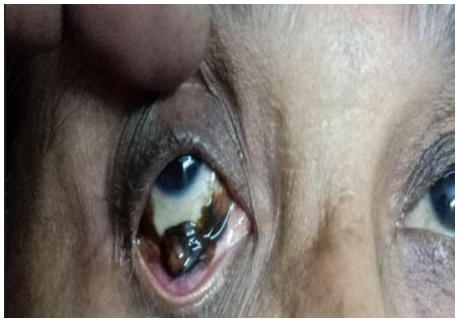

Fig. 2. Showing pigmented growth in the lower bulbar conjunctiva

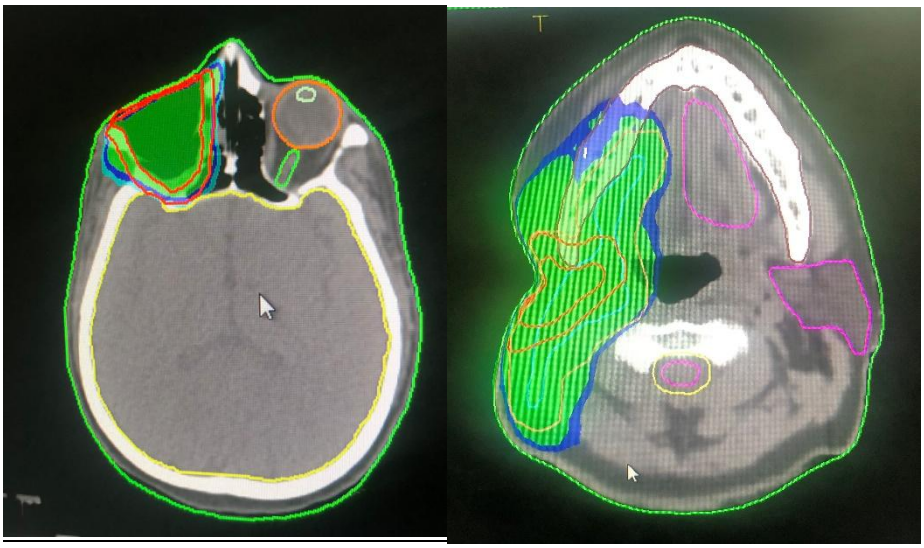

Fig. 3. Showing the radiation target volumes and coverage

3. DISCUSSION

Most common subtype of melanoma is superficial spreading, which makes up 70% of malignant melanoma cases [12]. These are typically brought on by exposure to the sun and affect the trunk and/or extremities. Nodular subtype melanoma accounts for 15% to 30% of cases [12]. The lentigo maligna subtype usually presents as macules that resemble freckles in older adults who has a history of UV exposure [13]. The least common melanoma subtype, acral lentiginous melanoma, only accounts for fewer than 5% of cases. This variety appears to be more prevalent in patients with dark skin tones and Asian ancestry, and it most usually affects the palms and soles. Mucosal melanoma makes up only 1% of all occurrences of melanoma, which is incredibly rare [14]. They typically appear in the head and neck, anorectum, vagina, and vulva [15].

People at high risk, such as those with a propensity for melanoma in their families or a history of numerous clinically abnormal moles, are advised to regularly self-examine their skin and follow up once per year, according to the American Academy of Dermatology (AAD). Key screening criteria for the ABCDE system include asymmetry, border irregularities, colour variation (different colours in the same region), diameter >6 mm, enlargement or evolution of colour change, shape, or symptoms. People with a family history should consider getting genetic counselling [16].

Surgery is the primary method of melanoma treatment. It is recommended to carry out a broad local excision, with the necessary margin depending on the thickness of the tumour. Sentinel lymph node(SLN) status is the most important predictive factor for recurrence in melanoma patients. It is recommended that patients have SLNB if their thickness is less than or equal to 0.75 mm and they exhibit any high-risk characteristics (ulceration, LVSI, or mitotic rate greater than or equal to 1/mm2). Complete lymphadenectomy is indicated for patients with positive SLNB since 18% of people with positive SLN will also have other lymph nodes spread [17,18].

Locally advanced Melanoma patients with resected node-positive typically get high-dose IFN consistently for a year. The role of immunotherapy in adjuvant situations is evolving. Based on the results of EORTC 18071, which demonstrated that using ipilimumab adjuvantly was superior to using a placebo for recurrence-free survival [19]. Ipilimumab therapy is now categorised as a category 1 treatment option by NCCN following resection of clinical stage III disease. Vemurafenib, a medication that specifically inhibits the BRAF V600 mutation, which is present in 40% to 60% of those with metastatic melanoma. Dabrafenib and trametinib (an MEK inhibitor), which are also approved for use in BRAF-mutated metastatic melanoma, are other treatment options. Pembrolizumab and Nivolumab which are anti-PD-1 inhibitors are being used more and more to treat melanoma [20,21].

In cases where surgery could leave patients with deformity, definitive radiation therapy is used. Candidates for RT alone include patients with superficial lentigo maligna (limited to epidermis) and lentigo maligna melanoma (invasive into dermis). These patients are typically elderly and may have extensive superficial lesions on the face. Nonsurgical methods may provide better function and cosmesis [22]. 50 Gy in 20 fractions with the appropriate energy electrons are reasonable [23]. Adjuvant radiation therapy is indicated for the treatment of primary tumour beds in melanomas with desmoplastic or neurotropic features, as well as thick lesions (>4 mm). Adjuvant radiation can be used to treat positive margins. Potential criteria for treating regional lymph nodes include multiple positive lymph nodes, extra capsular extension, lymph nodes 3 to 4 cm in size, involvement of the sentinel lymph node without full or adequate lymph node dissection, and recurrent illness [24]. The fractionation schedules that are most widely used are Hypo-fractionation. With a remarkable 10-year local control rate, hypo-fractionated RT (30 Gy/5 fractions) is a safe and effective adjuvant therapy for melanoma [25,26]. In order to prevent local recurrence of high-risk melanoma and recurrent melanoma of the eyelids, we advise considering adjuvant radiation.

4. CONCLUSION

Early detection of eyelid malignant melanoma is crucial to preventing potentially deadly outcomes, which have been recorded in multiple cases, especially when the cancer is growing on an existing nevus. We recommend radiation in adjuvant settings to reduce the local recurrence of eyelid melanoma.

CONSENT

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
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