

Management of Conjunctival Melanoma at the Site of Previous Ocular Injury

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Abstract

Conjunctivalmelanoma is relatively rare aggressive malignant tumor. Its incidence in the white population is estimated at 0.2 to 0.8 per million. Its management consists on surgical excision, cryotherapy, and eventually radiotherapy or local chemotherapy. UV rays are largely incriminated in the pathogenesis of melanoma, while the role of trauma is still a subject of controversy, this hypothesis of trauma is reinforced by the presence of melanomas in areas with low exposure to sunlight . We report a case of conjunctival melanoma evolving at the site of previous ocular trauma.

Key words: Melanoma, Conjunctiva , Ocular injury.

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I. Introduction:

Conjunctival melanoma is a relatively rare malignant tumor. Its incidence in the white population is estimated at 0.2 to 0.8 per million. [1] Melanoma is considered to be a multifactorial disease. Exposure toultraviolet (UV) rays is the most recognized and potentially modifiable risk factor of developing malignant melanomas because of its genotoxic effect.[2] The role of trauma in the pathophysiology of melanomas is also discussed in the literature.

II. Observation:

A 54-year-old man with a history of perforating ocular trauma caused by a wooden stick 20 years ago, occasioning a conjunctivo-scleral wound in the superior-nasal quadrant of the right eye, the wound was sutured without any complications. Recently he was referred for a conjunctivallesion that had been evolving for 4 months.

The ophthalmological examination found a pigmented mass in the bulbar-nasal conjunctiva of the right eye, according to the patient, this lesion develop at the same site of the previous ocular trauma. This lesion is pedicled, extending from the caruncle to the limbus. It has a polylobulated appearance, and richly vascularized with soft consistency(**Figure 1**). The temporal area of the eye is normal; particularly no primary acquired melanosis in the sclera. CT scan of the orbital region shows no intraocular extension.

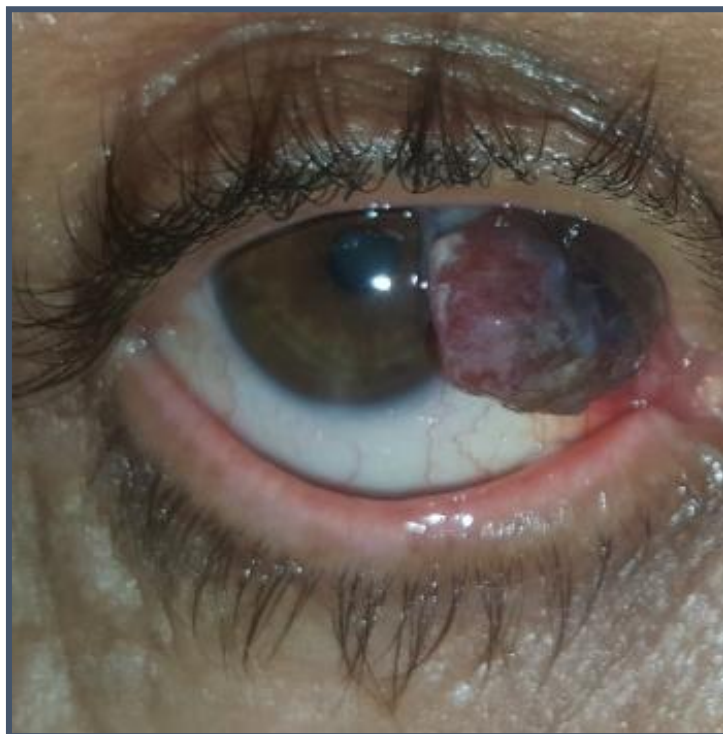


Figure 1: Nodular conjunctival malignant melanoma in the upper nasal quadrant of the bulbar conjunctiva.

Considering the strongly malignant aspect a complete resection was performed. The procedure is completed by the cryo-application of the excision bed. Chemotherapy based on mitomycin C was administered because of the large extent of the lesion (**Figure 2**).



Figure 2: The appearance after surgical resection .

The histological examination revealed a conjunctival malignant melanoma measuring 0.7x0.4x0.3 cm (**Figure3**). Radiological assessment of extraocular extension has returned to normal. The evolution is favourable with a 2-year follow-up.

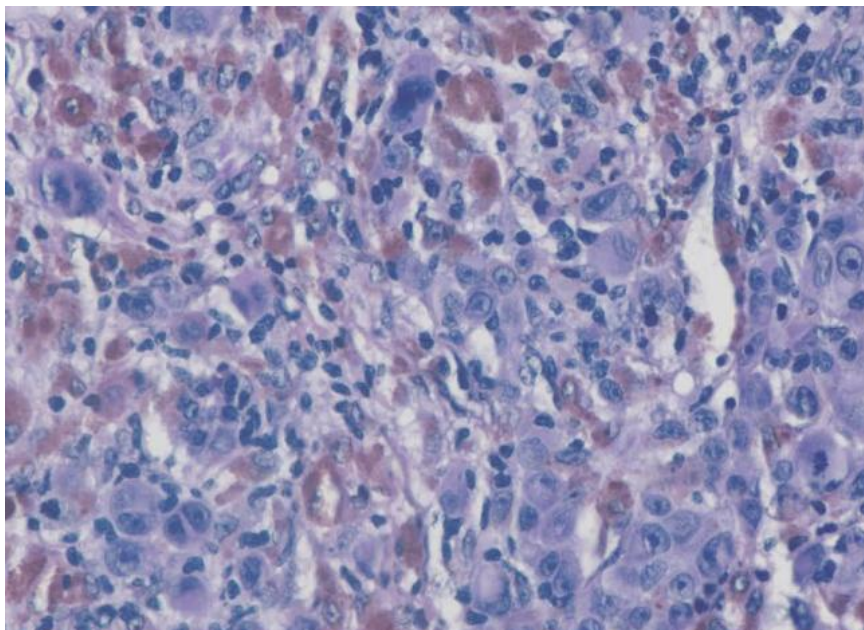


Figure 3: The histological analysis revealing a malignant melanoma.

III. Discussion

Conjunctival malignant melanoma accounts for only 5% of melanomas in the ocular region .[3] This cancer generally develops from a primary acquired melanosis in 53%, which is characterized in pathological anatomy by an abnormal proliferation of melanocytes in the conjunctival or corneal epithelium without reaching the basement membrane or the chorion, on a pre-existing nevus in 4%, or de novo in 37%. [4] It is an aggressive tumor with a metastasis rate approximately 32% at 15 years .[5] Its management consists on surgical excision using the "no touch" technique, followed by cryotherapy of the excision bed.[6] Adjuvant treatment may be combined with radiotherapy or local chemotherapy, notably mitomycin C.[7]

Melanoma results from the interaction between genetic sensitivity and environmental exposure. [2] UV rays are largely incriminated in the pathogenesis of melanoma, while the role of trauma is still a subject of controversy. However, it is an accepted risk factor for squamous cell carcinomas .[8] This hypothesis of trauma is reinforced by the presence of melanomas in areas with low exposure to sunlight, notably acral melanoma, where mechanical stress is suggested in the literature ,[9,10,11] knowing that melanoma of the feet is more frequent than melanoma of the hands .[12]

Some observations in the literature of "post-traumatic" ocular melanoma have also been reported .[13,14,15] This observation also illustrates an unusual association of a tumour 500 times less rare than skin melanoma :[1] conjunctival melanoma at the site of an old trauma. Waiting for an epidemiological study with sufficient numbers to decide on this possible risk factor.

IV. Conclusion:

This observation and review of the literature suggests the role of trauma in the occurrence of melanomas, prompting the ophthalmologist to be mindful of an eventual transformation of an old ocular scar for early management.

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