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Case Report

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Surgical Approach of Basal Cell Carcinoma on the Lower Eyelid: A Case Report

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Abstract

Basal cell carcinoma (BCC) is a common malignant tumor, originating from the basal cell layer of the epidermis. One of the known risk factors of BCC is intense exposure to ultraviolet radiation. The most common location is in the head and neck area, including the eyelids. More than 50% of BCCs of the eyelid initially occur on the lower lid. The gold standard of diagnosis of BCC is histopathology. Surgical excision using Mohs surgery is the first line of treatment for periocular BCC. Careful consideration should be made on reconstructing the eyelid after successful mass removal. Early diagnosis and treatment lead to a better functional and aesthetic outcome after surgery.

Keywords: Basal cell carcinoma; Mohs micrographic surgery; Eyelid reconstructions; Skin flaps

Introuduction

Basal cell carcinoma (BCC) is a form of skin cancer, and one of the most common tumors in the world. In the last decade the incidence of BCC has been reported to get higher, with the literature showing that approximately 70–80% of all skin carcinomas are represented by BCC [1]. A high prevalence is seen occurring in the head and neck region (80%), including the eyelids [2]. The most common age group is 60-80 years old, with a predominance of male patients. 1 More than 20% of the BCCs of the head and neck region emerge around the eye, with >50% on the lower lid, 30% on the medial canthus, 15% on the upper lid and 5% on the lateral canthus [3].

BCC arises from the epidermis, having a characteristic appearance of pearly pink bump, often with a central ulceration that won`t heal. This kind of cancer typically is not fatal and doesn`t give metastases, but it has an aggressive invading course which may cause destruction of the function and appearance of the eyelid. Also they tend to have a high level of recurrence. Recurrent BCCs usually are more aggressive and have a worse overall prognosis than the primary tumor [4-7].

The most important known risk factor in the incidence of BCC is a high and long in exposure to UV rays. Short-wavelength UVB radiation (290–320 nm, sunburn rays) plays an important role in BCC formation, as it damages DNA of the basal cells of the epidermis, and its repair system, resulting in progressive genetic alterations that lead to the formation of neoplasms [8]. Other risk factors include sun bed use, family history of skin cancers, immunosuppression, previous radiotherapy and chronic exposure to toxic substances [8].

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Since the clinical presentation is not always typical, the gold standard for BCC diagnosis is histology. Thus biopsy is recommended for every suspicious lesion. Other examinations are helpful in cases with orbital invasion to exclude bone and soft tissue involvement. CT scan can be used to visualize bone destruction, while MRI is more useful for visualizing soft tissue changes [9].

The main form of treatment of BCC is always surgical. The type of surgical approach needs to be individualized according to the localization of the mass, its size, relation to the eyelid margin and expansion. The goal of surgery is to achieve mass removal with negative excision margins and a functional and aesthetic reconstruction of the affect lid and area. The treatment of choice is usually Mohs Micrographic Surgery (MMS), with reconstruction with skin flaps graft or free grafts. Exenteration is considered in cases of bulbar or extensive orbital invasion. A cure rate of about 95% is achieved after treatment. Following surgery, the relapse rate is 1%–5% per year [4-6,10,11].

Case Report

A 70 year old male presented at our clinic with complaints of epiphora, itching and burning of the lower eyelid, and appearance of a wound that wouldn't heal in his right eye. On biomicroscopy examination, basal cell carcinoma of the lower eyelid was suspected. The mass was located in the medial part of the eyelid, near the canaliculus, while invading also the border. The patient was planned for surgical removal. Prior to surgery, CT scan and B scan of the eye were performed. CT scan showed no invasion of the bone or soft tissues of the orbit.

The surgery was done under local anesthesia. The first step consisted on a full thickness excision, while being careful on maintaining negative excision margins. In the second step, a cutaneous flap was created with incisions in the area between the cheekbone and the lateral part of the nasal side wall. Then the flap was rotated into position. The flap was sutured with the remaining eyelid portion. The skin defect was also sutured.

Two important points to take into consideration are : a) first, the creation a big enough flap so repositioning and suturing does not cause tension and traction of the skin; b) and second, incisions made along the natural folds of the face ensure a more aesthetical final result.

The material was sent for histopathological examination. The answer from the lab confirmed basocellular carcinoma as diagnosis.

Figure 1: BCC suspected in the first visit

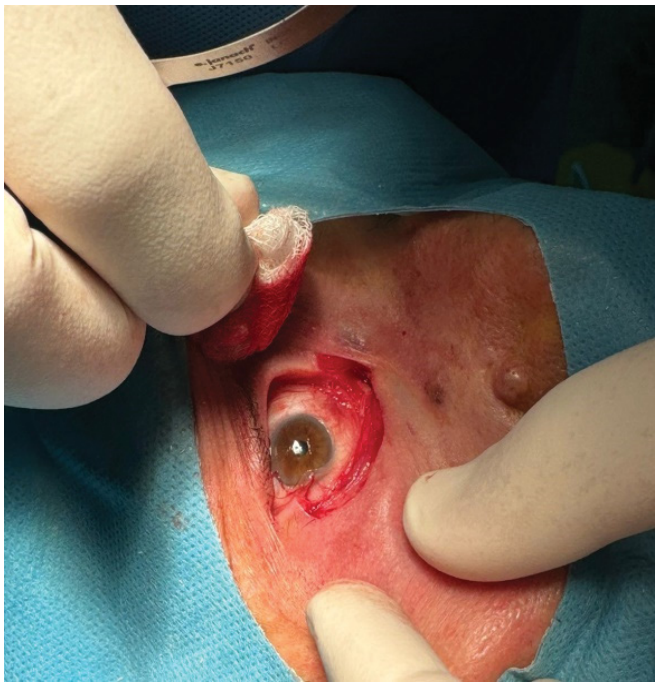

Figure 2: Removal of the BCC with negative excision margins

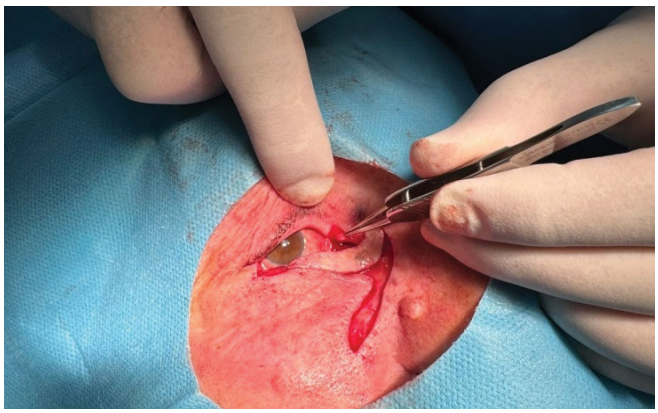

Figure 3: Cutaneous flap rotation

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Figure 4: Results directly after removal of the sutures one week after surgery

Discussion

Basocellular carcinoma is one of the most common skin cancers, often found in the eyelid area. It`s main diagnostical approach is clinical. BCC are not life threating, but have a high tendency of invading nearby structures. Thus, anytime a BCC is suspected, surgical removal is indicated. The surgical approach is different and depends on some factors like the mass location, size and its growth. After successful removal with negative margins is achieved, reconstruction of the defect is the next goal. Generally, eyelid reconstruction must be done according to two principles: first, the functional aspect of protecting the eye, and secondly, the aesthetic aspect. Diagnosis and treatment in the early stages, lead to a better functionality and aesthetic outcome. The final diagnosis is confirmed by histology. BCC have a high recurring rate, especially the first couple of years, so the patients must be put under regular follow up.

Conclusion

Early diagnosis and rapid and effective surgical treatment are associated with favorable results from a functional and aesthetic point of view. The final aspect was considered to be satisfactory for our patient.

Acknowledements

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Disclosures: None

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