

Basosquamous carcinoma of the lower eyelid

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ABSTRACT

Basosquamous carcinoma is known to occur among Caucasian males over the sixth decade of life. Though not common, it can be seen in females and environmental factors may not play a role. The diagnosis can be made only by histopathology. A middle aged lady was referred with a nodulo-ulcerative neoplasm of her right lower eyelid. Wide excision of the growth was undertaken with reconstruction of the lower lid. There was complete structural and functional recovery of the lid. Histopathological study of the specimen revealed it to be a case of Basosquamous carcinoma.

Keywords: Basosquamous, malignancy, keratolytic, metatypical, perineural

INTRODUCTION

Cutaneous malignancies are the most common cancers. ¹ The eyelids can develop the same range of skin cancers as the other parts of the body. Primary eyelid skin malignancies are rare, representing 3% of all skin cancers in the head and neck region. ² Basal Cell Carcinoma (BCC) is the most common eyelid tumour accounting for approximately 90% and its occurrence is more frequent in periocular malignancy than trunk and extremities. ²⁻⁴ Eyelid Squamous Cell Carcinoma (SCC) is less common than BCC, but potentially a more fatal disease. ⁵ It is the second most common malignant neoplasm of the eyelid; comprising

5–10% of all eye lid malignancies. ⁵ Although a slow-growing tumour, it can lead to significant morbidity in the periocular region as a result of orbital invasion. ⁴ Sebaceous gland carcinoma (SGC) arising from the periocular region is rare. The neoplasm can arise from the Meibomian gland in the tarsus, Zeis glands at the eyelid margin or sebaceous glands in the carruncle or eyebrow. ⁷ Meibomian Gland Carcinoma (MGC) represents 1% to 5.5% of eye lid malignancies and is considered to be the third most common eye lid malignancy after BCC and SCC. Eyelid malignancies can be bilateral. ^{3, 8}

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BCC has little metastatic potential, SCC has a reported metastatic rate up to 21% and SGC is reported to have an estimated metastatic rate of 9–40%. ^{2, 9} Basosquamous

carcinoma (BSC), also known as Metatypical carcinoma (MTC), Basaloid SCC and Keratolytic BCC share the features of both SCC and BCC. BSC is an extremely rare epithelial malignancy of the eyelid with aggressive behaviour. This malignant neoplasm is now considered a new variety of non-melanoma skin cancer with its own characteristics and histologic characteristics. We are reporting a 56 year old female patient who presented with BSC of the lower eyelid. This is the first case report of such a malignant lesion of the eyelid occurring in Brunei Darussalam.

CASE REPORT

A 56-year-old moderately nourished and built housewife was referred to Eye Centre with a history of itchiness and swelling of her right lower eyelid for the past one year. There was occasional bleeding after scratching the area. She denied any pain, recurrent styes or past lid surgery. She was not involved in any occupation.

Examination revealed that there was a 22mm x 12mm irregular nodulo-ulcerative growth arising from the outer two-thirds of

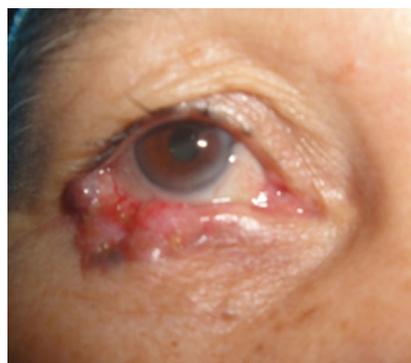
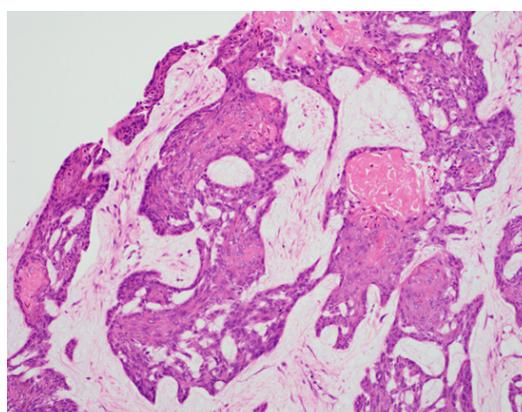


Fig. 1: Photo of the right eye at presentation showing an irregular nodulo-ulcerative growth arising from the outer two-thirds of the right lower lid with large vessels coursing over it.

the right lower lid with large vessels coursing over it. Eyelashes were absent in that segment with distortion of corresponding intermarginal strip (Figure 1). The growth extended to the corresponding conjunctival surface. There was a blood crust near the ulcerated area showing a recent bleed. The eyelid was not fixed to the lower orbital rim. She had 6/6 vision in either eye with normal intraocular pressure and good ocular motility. The regional lymph nodes were not enlarged. Her blood parameters were normal.

Chest radiograph was normal. A com-



Figs. 2: a) Surgical excision of the tumour, and b) Histopathology of the tumour. Small round cells arranged in adenoid pattern and situated in the upper dermis. Nuclei of the cells were hyperchromatic. The peripheral cell layer was arranged in palisading pattern. Also round to polygonal cells containing well defined cell borders and hyperchromatic nuclei are seen. Individual cell keratinisation can also be seen (H & E stain, x40).

puted tomography scan and magnetic resonance imaging (MRI) of the orbits did not reveal any extension of the growth into the orbit. A provisional diagnosis of a right lower eyelid BCC; the nodulo-ulcerative variety was made.

Under general anaesthesia, the growth was excised with 4 mm clear margin all-round. The defect in the lower eyelid was covered by a rotation flap raised from the upper lid. (Figure 2a) The specimen was sent for histopathology. Histopathological examination showed an ulcerated tumour formed of small round cells arranged in adenoid pattern and situated in the upper dermis. Nuclei of the cells were hyperchromatic. The peripheral cell layer was arranged in palisading pattern. The tumour was attached to the basal cell layer of the overlying epidermis which was ulcerated. Also seen were round to polygonal cells containing well defined cell borders and hyperchromatic nuclei. There was individual cell keratinisation. Maximum depth of the tumour was 3.5 mm. There was no lymphovascular or perineural invasion. The margins of excision were well clear of the tumour. The appearances were those of BSC (Figure 2b). The final diagnosis was BSC (Metatypical).

The patient was discharged on the seventh day. The wound healed well with full functional recovery of the right lower lid. (Figure 3) She was closely monitored every three months during the first year and every six months from second year onwards. There has been no local recurrence or metastasis so far.

DISCUSSION

Like most cancers, the risk factors for cutane-



Fig. 3: Coloured photo of the right eye showing the final postoperative outcome.

ous malignancies include cutaneous and systemic disorders, genetic and environmental components.¹⁰ Exposure to ultraviolet radiation of sunlight is an important environmental factor.³ A linear correlation exists between the frequency of skin cancer and the amount of ultraviolet light exposure.

The incidence of eyelid malignancy is on the rise.^{4, 11} Lower eyelid is the most common location for lid malignancies.^{11, 12} The lower eyelid and medial canthus are the most frequent sites of origin of BCC and SGC's are seen in the upper eyelid.^{7, 12}

BSC is a locally invasive neoplasm with a propensity for lymph node invasion and distant metastasis into lungs. Ever since its introduction, BSC was a subject of great debate between pathologists with one school of pathologists arguing that BSC is an aggressive variant of SCC while others arguing it as a variant of BCC.¹³ In 1952, Montgomery labelled it as "Metatypical Carcinoma".¹⁴ Confusing terminology, limited clinical and histological data and contradictory surgical experience of clinicians made the subject poorly ac-

ceptable in medical literature. In 1974, the World Health Organisation confirmed the demarcation of MTC from BCC and SCC.¹³ In order to avoid confusion, De Faria in 1985 advised that a transition zone must be present between the BCC and SCC portions of the proposed malignancy to designate it as BSC.¹³ In 1986, Wain *et al.* classified it as an independent malignancy.¹⁵

Some eyelid neoplasms grow quickly, while others may take several years to reach noticeable size. BSC is a slow growing neoplasm. The wide variation in clinical appearances presents great difficulty in differentiating BSC from SCC and BCC.⁵ The incidence is reported to be less than 0.5% of all BCCs.¹⁶ BSC are seen on the head and neck; mainly involving central face with male Caucasian preponderance.¹⁷ There is paucity of data available regarding the occurrence, recurrence and metastasis rates of BSC; as most available data are based on retrospective studies with limited number of cases.¹⁷ Diagnosis is made on the basis of histopathologic study. Incorrect histopathological interpretations have been reported in 39–77% of cases.⁹ Eyelid SCC may develop *de novo* in relatively normal skin.⁵

Due to the rarity of this neoplasm, there has been no specific recommended treatment plan. The proposed treatment modalities include: curettage and electrodesiccation, wide local excision with post-operative margin assessment, Moh's micrographic surgery and radiation therapy. Some authors considering the aggressive nature of the neoplasm have suggested multimodal therapy including radical surgical excision with radiotherapy with additional chemotherapy.

Wide Excision still remains the best treatment considering its infiltrative nature. In spite of wider excision, recurrences are reported making a histologically tumour free margin a must. Adjuvant radiotherapy is recommended for patients with eyelid BSC's with residual disease, positive or close margins, lymph node involvement, perineural or lymphovascular invasion or deep muscle invasion to achieve regional and local control.²

In conclusion, BSC is a rare and aggressive form of eyelid malignancy and a potentially fatal disease. It is established as a separate malignant neoplasm. If detected early and treated adequately, the prognosis could be excellent. Surgical excision is still considered the gold standard for all primary eyelid neoplasia including BSC. Tissue conservation remains an important issue in eyelid tumour excision. Lid salvage should be the goal of treatment; wherever possible; even in long-standing cases. All excised lesions from the eyelid should be submitted for histopathological studies; as it is not possible to obtain 100% accuracy in diagnosis only on clinical grounds alone. Perineural and lymphatic spread are adverse prognostic signs, which may require adjuvant therapies. Palpation of the pre-auricular, sub-mandibular and other neck node chains is mandatory. Metastatic BSC lesions are more difficult to treat and have poor prognosis. As a certain percentage of tumours will recur regardless of treatment modality, careful counselling and long-term follow-up is recommended. This patient has been closely monitored since discharge. Two years on there has been no recurrence or metastasis.

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