Orbital Adnexal Malignant Tumours: A Report of Two Cases

Case Report

Case 1
A 54-year-old male patient presented to the eye Outpatient Department (OPD) three years ago with a complaint of a lump over the medial canthus of the right upper eyelid. The lump was operated on as a sebaceous cyst in 2019. Cutler Beard stage I and stage II surgery was performed. The postoperative period was uneventful. However, the histopathological report revealed sebaceous carcinoma.

Again in 2022, the patient returned to the eye OPD with a recurrence in the previously operated area due to positive surgical margins. An MRI (T1 weighted) showed a heterogeneous lesion involving the medial portion of the right orbit, the right peri-orbital region, the right eyelid, and affecting the extraocular muscles and right lacrimal gland. The features were suggestive of a neoplastic mass, with squamous cell carcinoma with hydropic changes and basal cell carcinoma with sebaceous differentiation considered as differential diagnoses. There was also pressure effect observed on the right ocular bulb with involvement of the extraocular muscles. Patient was also examined for any enlargement of sentinel lymph nodes.

He underwent reoperation and the specimen was sent to the Pathology department for histopathology. Grossly, the size of the specimen was 7.5x4.5x3 cm, with the optic nerve measuring 0.8 cm. On grossing, a greyish-white growth measuring 4.5x3.5x3 cm was noted. Microscopically, the tumour mass was arranged in a lobular pattern, composed of pleomorphic cells with eccentric hyperchromatic nucleus, inconspicuous nucleoli, and multivacuolated cytoplasm. Extensive areas of comedo necrosis were observed, along with lymphovascular invasion. The adjacent inferior orbital bone margin showed invasion by the growth. The histomorphological features were suggestive of sebaceous carcinoma with stage pT3bN0M0. Immunohistochemical expression of HER2/neu was negative. The patient had an uneventful postoperative recovery and is doing well after six months of follow-up.

Case 2
An 83-year-old male patient presented to the eye OPD with pain, swelling, and a foreign body sensation in the left lower eyelid for the last six months. On examination, his visual acuity was 6/18 in both eyes, with senile immature cataracts in both eyes and a normal fundus. During the local examination of the left lower lid, a vascular mass measuring 5x10 mm and located near the lateral lid margin was discovered. Due to suspicion of a pre-malignant lesion, he was examined for any enlargement of sentinel lymph nodes. An ultrasound revealed a heterogeneous lesion on the left lower eyelid, which raised concerns of a malignant lesion. No bone involvement was observed. Fine needle aspiration cytology was performed using a standard technique, followed by staining with Papanicolaou and May Grunwald Giemsa (MGG). The smear showed irregular clusters of tumour cells with pleomorphic centrally located nuclei and coarse...
chromatin. The patient underwent surgery, and the specimen was sent for histopathology.

Macroscopically, the specimen was a globular skin-covered tissue piece measuring 2×1×1 cm [Table/Fig-2a]. Microscopically, the section revealed the histology of a neoplastic lesion composed of pleomorphic, hyperchromatic cells with centrally placed vesicular nuclei, prominent nucleoli, and granular eosinophilic cytoplasm. These cells were arranged in lobules, sheets, and glands separated by fibrocollagenous tissue [Table/Fig-2b,c]. Mitosis, necrosis, and haemorrhage were present. The histomorphological features were suggestive of sebaceous carcinoma with pT3bNxMx. Immunohistochemical expression of HER2/neu was negative. The patient’s postoperative recovery was uneventful, but he was lost to follow-up after two months.

**DISCUSSION**

Sebaceous carcinoma of the eyelid is a very rare malignant tumour, accounting for 1-1.5% of all eyelid malignancies [1]. It is more commonly observed in the sixth to eighth decade of life, with a higher incidence in females. Typically, it originates from the meibomian glands, making it more prevalent in the upper eyelids. This aggressive tumour has a tendency to metastasise to regional lymph nodes and distant organs, resulting in a poor prognosis [2].

Extraocular sebaceous carcinoma constitutes approximately 25% of sebaceous neoplasms and primarily affects the head and neck regions, followed by the trunk, salivary glands, genitalia, breast, ear canal, and intra-oral cavity [3].

Clinically, sebaceous carcinoma on the eyelid can be mistaken for persistent conjunctivitis, chronic blepharophlebitis, or chalazion. If conjunctivitis or chalazion does not improve after three months of observation, a biopsy should be performed. It predominantly occurs in elderly Caucasian individuals. Ocular sebaceous carcinoma often exhibits regional metastasis and affects both sexes equally, whereas extracocular sebaceous carcinoma is more common in men. In this case, both patients were elderly males, consistent with previous studies [4-7].

The clinical presentation of sebaceous carcinoma varies, presenting as a small, erythematous, or yellow slowly enlarging firm papule or nodule on the skin. Diagnosis is often delayed, requiring pathological confirmation of neoplastic cells with sebaceous differentiation. Histologically, the tumour cells are arranged in well-defined lobules with circumscribed borders. The cells display pleomorphism with eccentric hyperchromatic nuclei, inconspicuous nucleoli, and multivacuolated cytoplasm. Lymphovascular invasion is observed, and common findings include mitosis, marked nuclear atypia, hemorrhage, and necrosis. Microscopically, sebaceous carcinoma often resembles molluscum contagiosum, pyogenic granuloma, keratoacanthoma, and squamous cell carcinoma with hydroid changes, as well as basal cell carcinoma with sebaceous differentiation. Squamous cell carcinoma is ruled out due to the absence of evidence of keratinization in the form of dyskeratotic cells and keratin pearls. Additionally, the absence of basaloid differentiation and peripheral palisading excludes basal cell carcinoma as a diagnosis. Sebaceous carcinoma has poorly differentiated and anaplastic types. The poorly differentiated variant exhibits marked pleomorphism, prominent nucleoli, and a high mitotic count, while the anaplastic variant displays scanty basophilic cytoplasm and extensive necrosis.

Sebaceous carcinoma of the eyelid is a rare condition with an unfavorable prognosis and a tendency to metastasise. It is generally not considered as a differential diagnosis for tumours arising from the eyelids, resulting in delayed treatment. Hence, we emphasise the need to raise awareness about this uncommon neoplasm occurring in unusual sites to expedite patients’ survival.

**REFERENCES**


