examination of patients pretreatment to look for pre-existing retinopathy and subsequent examinations while on treatment. If severe ocular toxicity occurs, INF therapy should be discontinued.[1]

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Sir,

Intraepithelial sebaceous gland carcinoma with pagetoid spread presenting as marginal keratitis: a case report

Eye (2003) **17,** 536–537. doi:10.1038/sj.eye.6700387

Sebaceous gland carcinoma of the ocular adnexa is a rare lesion arising from the meibomian glands, the glands of Zeis, sebaceous glands in the caruncle, and fine cutaneous pilosebaceous glands of the eyelids. The report incidence ranges from 1 to 5.5% of the malignant eyelid tumours.[1]

We report a case of intraepithelial sebaceous gland carcinoma masquerading as marginal keratitis with extensive intraepithelial involvement of conjunctiva and the skin.

Case report

A 71-year-old man presented with a 2-year history of a chronically irritable left eye. His local doctor had treated him with various topical antibiotics for unilateral blepharitis and recurrent conjunctivitis with little or no improvement. On examination, he was found to have a localized thickening of the left upper lid with surface irregularity and telangiectasia. No cicatrization was noted. The supronasal cornea showed peripheral corneal infiltrates.

The ophthalmic casualty doctor took a punch biopsy of the eyelid lesion and then commenced the patient on Predsol 0.5% four times a day to the left eye for marginal keratitis.The patient was seen 1 week later. At this stage the patient was symptomatically better, but his clinical signs in the cornea did not improve. It was then observed that the supronasal corneal epithelium actually had colonies of abnormal cells associated with superficial vascularization (Figure 1).

The rest of the corneal epithelium was also diffusely abnormal and so also the adjacent conjunctival epithelium. Preauricular and submandibular nodes were not palpable. Multiple corneal biopsies from the suspicious sites were taken. In addition, conjunctival map biopsies from 19 different sites of bulbar, palpebral, and tarsal conjunctiva were also taken. Histology showed intraepithelial sebaceous gland carcinoma with pagetoid spread in the skin, conjunctiva, and the cornea.

The management of the patient included a referral to a multidisciplinary oncology clinic, a magnetic resonance image of brain and orbit, a computerized tomography scan of neck, thorax and abdomen, and also a liver

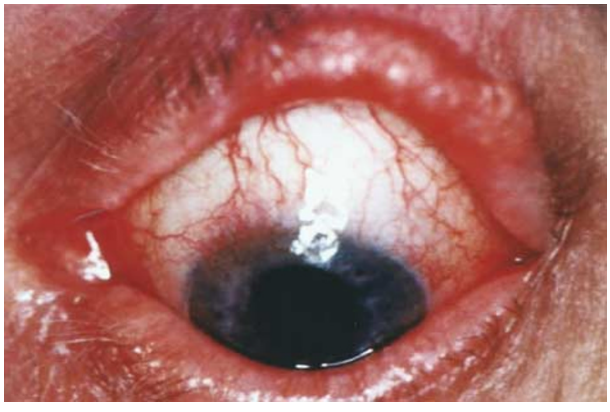

Figure 1 Photograph of the left eye showing thickening of upper lid, superficial corneal vascularization, and peripheral corneal infiltration.

function test. The goal of the management is to determine the extent of intraepithelial spread, identify sites of metastasis spread, and exclude the possibility of underlying visceral carcinoma as Muir Torre syndrome. The patient underwent full orbital exenteration with split skin graft. Histology reconfirmed extensive conjunctival involvement (pagetoid spread) by a poorly differentiated sebaceous gland carcinoma. The spread predominantly, but not exclusively, involved the tarsal conjunctiva of both upper and lower lids. One small focus of equivocal stromal/muscle infiltration by carcinoma was noted, but no vascular invasion was seen. No orbital apex structure was involved with the tumour.

Discussion

Sebaceous gland carcinoma, although rare, is particularly treacherous. It is slow growing, clinically mimicking several benign processes including chalazion, blepharoconjunctivitis, keratoconjunctivitis,[2] conjunctival papilloma,[3] granuloma, and even ocular pemphigoid. It may also mimic certain malignant lesions like basal cell carcinoma and squamous cell carcinoma.

Corneal involvement as the presenting sign of sebaceous gland carcinoma is unusual but has been reported as superior limbic keratoconjunctivitis[2] and peripheral ulcerative keratitis.[4]

Between 40 and 80% of sebaceous glands of ocular adnexa are associated with some degree of intraepithelial spread.[5] Most intraepithelial sebaceous gland carcinomas are related to an underlying invasive tumour of the meibomian gland, the gland of Zeis, or both. It is generally believed that the intraepithelial component originates with the invasive tumour and spreads in centripetal fashion from the underlying tumour. This hypothesis is supported by the observation that the number of epithelioid cells tends to gradually decrease further from the nidus of the invasive tumour as observed in our case, in which conjunctival map biopsies showed all biopsy sites close to the tumour nidus (inferior tarsal conjunctiva) to be positive. Only one biopsy site (limbal) was negative and this was well away from the tumour nidus. Intraepithelial spread is associated with much worse prognosis. Rao *et al*[6] reported in their series a mortality rate of 43% in patients with intraepithelial pagetoid spread in contrast to 11% in those without intraepithelial spread. Similarly, they also noted that the mortality increased from 8 to 45% in patients who had minimally infiltrative tumours compared with highly infiltrative tumours. While our patient showed fairly extensive intraepithelial tumours, only one area of stromal involvement was identified that spared the blood vessels. The recommended management of sebaceous gland carcinoma is prompt wide excision of the involved tissue with histological monitoring of the surgical margins.[7] For patients with extensive involvement, such as in our case, total exenteration may be the best surgical option.[8]

In less extensive but diffuse cases, an alternative approach is wide excision of nodular lesions of the lid with total conjunctivectomy and superficial keratectomy. The use of radiotherapy as an adjuvant measure is controversial.[9]

To our knowledge, this is the first case report of sebaceous gland carcinoma of ocular adnexa presenting as marginal keratitis. This report highlights the importance of high index suspicion on the part of the ophthalmologist when encountered with a multitude of these clinical signs. An early biopsy can hence be lifesaving in these otherwise potentially highly lethal tumours.

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