Sir,

Eyelid sebaceous gland carcinoma (SGC) treated with 'slow' Mohs' micrographic surgery

Sebaceous gland carcinoma (SGC) is a rare eyelid tumour that may masquerade as a recurrent chalazion or blepharitis.[1,2] We report a patient with SGC who had serial incision curettage for recurrent 'chalazion'. We emphasise the need for adequate incisional biopsy and discuss the advantage and disadvantage of Mohs' micrographic surgery using paraffin-embedded sections, 'slow Mohs'.

Case report

A 57-year-old female patient with a presumed left upper lid chalazion had incision and curettages of the lesion on four occasions within 6 months. Histopathologic analysis of a shave biopsy performed at the fourth episode showed fibrosis, chronic inflammatory changes, and congestion around small seromucinous cysts, but no evidence of malignancy. After 3 months the lesion recurred. A large incisional biopsy was performed and histopathological analysis showed a highly aggressive neoplasm in the dermis, consistent with SGC (Figure 1a). There were germinative and clear cells with bubbly cytoplasm, numerous mitotic figures (Figure 1b), and immunostaining was positive for epithelial membrane antigen (EMA) and predominantly negative for carcino-embryogenic antigen (CEA).[3] Further sections were cut from the previous biopsy for comparison, but still revealed no tumour.

The patient was referred to the Oculoplastic Service. A $3 \times 4\,m^2$ tumour, on a posterior marginal aspect of her left upper lid, was noted (Figure 2). She underwent Mohs' micrographic excision of the tumour, with horizontal paraffin-embedded sections, because of the difficulty of assessing pagetoid spread on frozen sections. Full-thickness excision of over 75% of her upper eyelid was eventually required to clear the lesion locally. Histology was received 3 days after the Mohs' procedure was performed. During the period intervening between the Mohs' procedure and reconstruction, the eye was covered with a nonadhesive dressing. Reconstruction was performed by with a free tarso-conjunctival graft from the contra-lateral upper lid, with an advancement flap and a free skin graft from the ipsilateral lid. A fine needle aspiration (FNA) biopsy of an ipsilateral preauricular lymph node confirmed metastatic SGC. She had a total parotidectomy and neck dissection, and histopathological analysis confirmed extracapsular intraparotid lymph node involvement. She therefore underwent adjuvant radiotherapy to the neck. A metastatic survey, including an MRI of her upper body and head, was normal. She is still alive, with no evidence of recurrence at the primary site, nor further regional or systemic metastases, 36

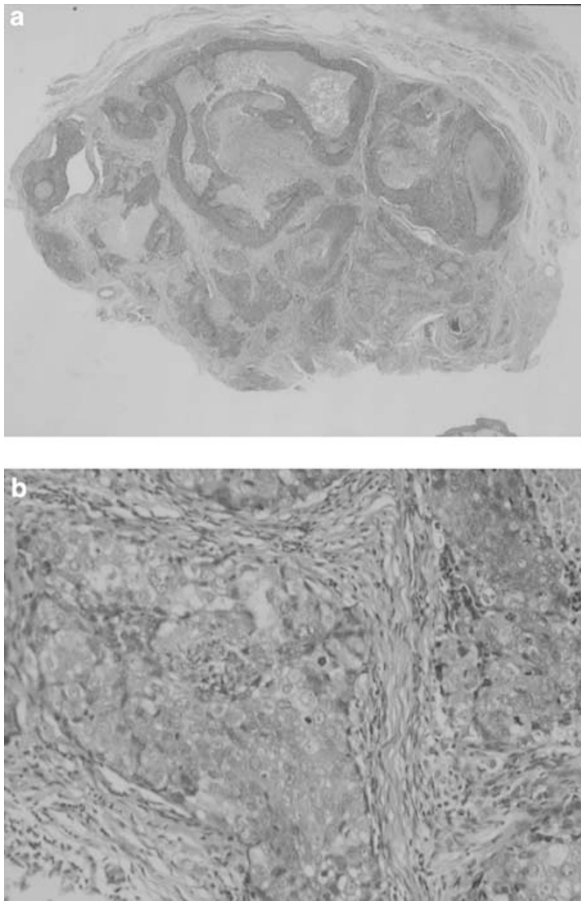

Figure 1 (a) Low-power photomicrograph of a relatively well-circumscribed dermal adnexal tumour (haematoxylin-eosin, original magnification × 40). (b) High-power photomicrograph showing an infiltrative pattern, numerous mitoses, and occasional cells with vacuolated pale staining cytoplasm indicating sebaceous differentiation (haematoxylin-eosin, original magnification × 100).

Figure 2 Partially everted left upper eyelid prior to Mohs' micrographic surgery.

months following the slow Mohs' micrographic excision and 4 1/2 years after initial presentation.

Comment

This case highlights the difficulty in making the correct diagnosis and the management of these relatively rare tumours. It also reports the use of 'slow' Mohs' micrographic surgery in the excision of the tumour.

To avoid delay of diagnosing SGC, early referral to an oculoplastic and oncology service is recommended for a recurrent chalazion or unilateral blepharitis. The eyelid should always be everted, because this may reveal an SGC. A good incisional biopsy is essential.

The advantages of Mohs' micrographic surgery, in comparison to a conventional excision of nonmelanotic skin cancer, are (1) definitive margin excision and (2) minimal loss of surrounding normal tissue. Used with haematoxylin and eosin staining of frozen horizontal sections, this is often the treatment of choice for eyelid basal cell carcinoma (BCC).[4] Since SGC is a nonencapsulated dermal tumour that may show pagetoid spread (ie intra-conjunctival or intra-epidermal) a variant of Mohs' micrographic surgery was used to excise the primary tumour, slow Mohs'. Slow Mohs's uses paraffin embedded sections to identify areas of pagetoid spread which would be difficult or impossible to assess on frozen section and may well extend beyond the clinical margins of a tumour. It has been reported that SGC is sometimes multicentric or has skip lesions, but this may represent sectioning bias of different extensions of the same contiguous tumour.[5] If SGC truly shows noncontiguous growth, then slow Mohs' would not be an appropriate technique, as horizontal sections would not reveal all the components of a lesion. The question of multicentric origin and non-contiguous spread of these tumours is still under debate. It is important that a full oncological assessment and management is carried out by a multidisciplinary head and neck team, including dermatological and oculoplastic surgeons.

Even though this patient had a very small tumour and local excision was complete, pagetoid spread and local lymph node involvement were present and hence the prognosis remains poor.[5–7] Pagetoid invasion of the conjunctiva can be detected by conjunctival map biopsies,[8] and may be an indication for exenteration, although a recent paper has reported the effective use of topical Mitomycin-C in such patients.[9] This patient had a very small tumour, but pagetoid spread meant that 75% of her upper eyelid was excised to clear this.

If SGC is suspected in patients with apparent recurrent chalazia, a full-thickness incisional eyelid biopsy should be performed in preference to a shave. Slow Mohs' is useful for local clearance and preservation of normal tissue in patients with SGC, but it is not known, as yet, whether it will improve survival rates. Although this is only a single case managed with 'Slow' Mohs' micrographic surgery, its use should be considered, taking into account apparent advantages and possible disadvantages.

References

1 Rao N, Hidayat A, Mc Lean I, Zimmerman L. Sebaceous carcinomas of the ocular adnexa: a clinicopathologic study of 104 cases with 5 year follow up data. *Hum Pathol* 1982; **13**: 113–122.
2 Nelson BR, Hamlet R, Gillard M, Railan D, Johnson TM, Arbor A. Sebaceous carcinoma. *J Am Acad Dermatol* 1995; **33**: 1–15.
3 Johnson JS, Lee JA, Cotton DW, Lee WR, Parsons MA. Dimorphic immunohistochemical staining in ocular sebaceous neoplasms: a useful diagnostic aid. *Eye* 1999; **13**(1): 104–108.
4 Cook BE, Bartley GB. Treatment options and future prospects for the management of eyelid malignancies. *Ophthalmolgy* 2001; **108**(11): 2088–2098.
5 von Below H, Rose GE, McCartney ACE, Wright JE. Multicentric sebaceous gland carcinoma of the lid? *Br J Ophthalmol* 1993; **77**: 819–820.
6 Ni C, Searl SS, Kuo PK. Sebaceous cell carcinomas of the ocular adnexae. In: Ni C, Albert DM, (eds) *Tumours of the eyelid and orbit: a Chinese–American collaborative study. Int Ophthalmol Clin* 1982; **22**: 23–61.
7 Zurcher M, Hinstchich CR, Garner A, Bunce C, Collin JR. Sebaceous carcinoma of the eyelid: a clinicopathological study. *Br J Ophthalmol* 1998; **82**: 1049–1055.
8 Putterman AM. Conjunctival map biopsy to determine pagetoid spread. *Am J Ophthalmol* 1986; **102**: 87–90.
9 Shields CL, Naseripour M, Shields JA, Eagle RC. Topical mitomycin C for pagetoid invasion of the conjunctiva by eyelid sebaceous gland carcinoma. *Ophthalmology* 2002; **109**: 2129–2133.

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Eye (2004) **18,** 854–855. doi:10.1038/sj.eye.6701330
Published online 20 February 2004