ophthalmologists can provide important information regarding the prognosis of GvHD by assessing the conjunctival morphological changes and prevent the development of severe ocular complications.[9]

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Sir,

Sporadic Burkitt's lymphoma presenting as solely orbital disease in a 78-year-old

Orbital involvement in sporadic Burkitt's lymphoma is extremely rare and only 5 cases have previously been reported. We present a case of primary orbital Burkitt's lymphoma in a 78-year-old white woman and outline the clinical features, histological findings and management.

Case report

A 78-year-old white woman was referred from another unit to the orbital clinic at Moorfields Eye Hospital. She had a 3 week history of increasing swelling at the upper outer quadrant of her left orbit. At the time of attendance she had experienced rapid increase in the swelling associated with severe pain over the previous 24 h. She also described fluctuations in her vision. She had no previous ophthalmic history. She was hypertensive and had suffered a stroke 12 years previously which had left her with no motor deficits. Her medications included amlodipine and aspirin.

On examination her visual acuities were 6/9 in the right eye and 6/12 in the left. Pupillary responses and colour vision were normal. She had a swelling at the superotemporal margin of her left orbit measuring 1.5 cm by 2 cm. This was associated with proptosis of 1 mm and inferonasal displacement of the left globe (Fig. 1). The anterior segment examination was normal. Examination of the posterior pole revealed choroidal folds affecting the superotemporal quadrant. CT scanning showed a left superotemporal orbital mass in the region of the lacrimal gland causing nasal displacement of the globe (Fig. 2). A differential diagnosis of dacroadenitis, lymphoma or malignant mixed tumour of the lacrimal gland was made on the basis of the clinical history and the CT scan findings and she was listed for orbital biopsy to elucidate the nature of the lesion. An anterior orbitotomy and biopsy of the lesion was conducted through a skin crease incision. The orbital lobe of the left lacrimal gland was found to be smoothly enlarged and firm in texture.

Histological investigation established the diagnosis of a high-grade B cell lymphoma with appearances consistent with Burkitt's lymphoma (Fig. 3). Immunohistochemical markers were positive for CD10 and CD20 (Fig. 4). A full blood count was normal apart from a mild eosinophilia, and plasma protein electrophoresis was normal.

She was referred to the radiotherapy unit at St Bartholomew's Hospital. Staging revealed no evidence of systemic disease and for this reason she was treated with primary local radiotherapy. She received a total of 30 Gy in 15 fractions over a 21 day period between 19 November 1998 and 11 December 1998. Treatment was given using 6 MV photons via a three-field plan. One

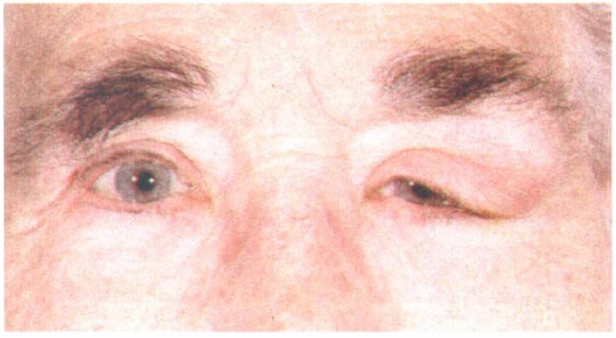

Fig. 1. *Clinical photograph of the patient at presentation showing inferonasal displacement of the left globe by the tumour associated with mild proptosis.*

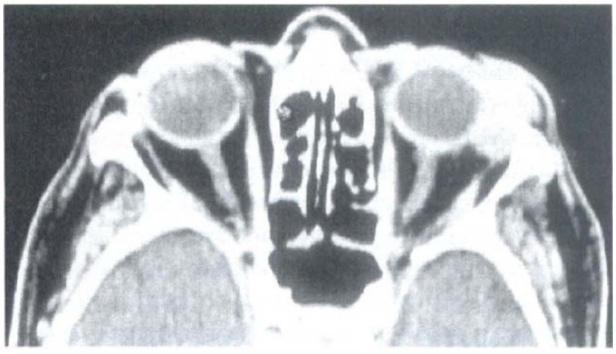

Fig. 2. *Axial CT scan of the orbits and brain showing enlargement of the left lacrimal gland with nasal displacement of the globe.*

month after completing this course of treatment she was well and there was no evidence of local or systemic recurrence.

Five months later she was reviewed and it was found that although there was no evidence of orbital recurrence, she had a painless rubbery mass in the left preauricular region measuring 3 cm by 3 cm. There was no organomegaly or evidence of distant metastases. These findings were felt to indicate a recurrence of her lymphoma and it was arranged for her to be readmitted for restaging of the tumour and further treatment. However, she was lost to follow-up and underwent no further treatment. The patient's general practitioner was contacted later in the year and he reported that the patient had died in September 1999, 9 months after completing the original course of radiotherapy.

Comment

Involvement of the orbit with Burkitt's lymphoma is well recognised in children in the endemic form of the disease in equatorial Africa[1] and may occur in association with Epstein Barr virus infection as a manifestation of acquired immune deficiency syndrome.[2] In the sporadic form of the disease, orbital involvement is rare and has

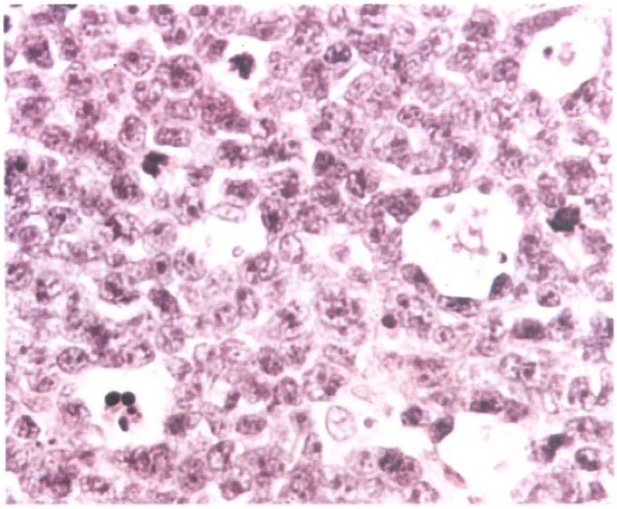

Fig. 3. *Photomicrograph showing the typical appearance of Burkitt's lymphoma in which tightly packed malignant lymphocytes are interspersed with large pale tingible body macrophages giving a 'starry sky' appearance (original magnification ×60, haematoxylin and eosin).*

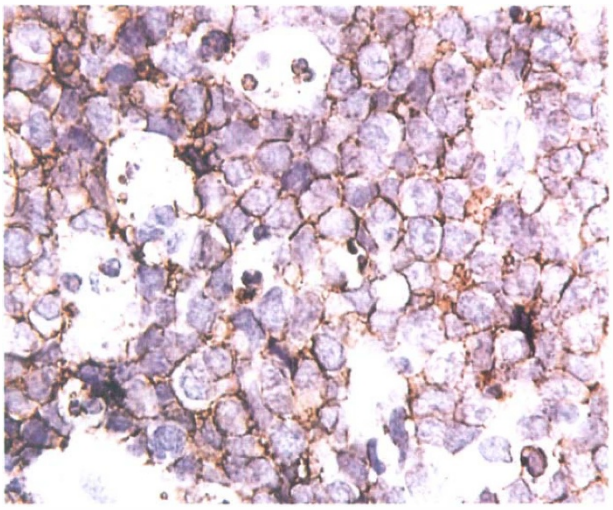

Fig. 4. *Photomicrograph showing the malignant lymphocytes outlined by brown staining using anti-CD20 immunohistochemistry. This phenotype indicates a B-lymphocyte derivation (original magnification ×60, anti-CD20, DAB chromogen).*

only been previously reported in 5 cases. In a recent study of 192 patients with orbital lymphoma at Moorfields Eye Hospital none had Burkitt's lymphoma.[3] Whilst the sporadic form has been reported in patients up to the age of 70 years[1] the oldest patient of the 5 reported cases[4–8] with orbital involvement was 22 years of age.[6] This case presented at a particularly old age for this tumour, especially with orbital involvement.

The tumour is associated with a high mortality: 3 of the 5 cases died within a year of diagnosis; 2 were alive after 8 months and 4½ years follow-up respectively. Our patient showed evidence of probable recurrence at 5 months after initial treatment and died after 10 months.

This case demonstrates that sporadic Burkitt's lymphoma may present with an orbital mass and may do so in the elderly age group. In common with previously reported cases, this tumour was aggressive and fatal within a year despite prompt treatment with radiotherapy.

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Sir,

Watery eye: a new side-effect of isotretinoin therapy

Isotretinoin (13-*cis*-retinoic acid), a synthetic vitamin A analogue, is commonly used in the treatment of severe acne. It is associated with a number of adverse reactions, and its teratogenicity is well known. Common ocular side-effects include blepharitis, conjunctivitis, dry eyes, contact lens intolerance, and corneal opacitieis.[1] We report a case of epiphora due to lacrimal punctal occlusion association with isotretinoin therapy; as far as we are aware, this side-effect has never been described before.

Case report

A 19-year-old Caucasian man presented with a 2 month history of watery right eye. He had no previous ophthalmic problems. He had been commenced on isotretinoin 4 months previously for severe acne, and was on no other medications. The course of treatment was for 12 months.

Examination revealed an occlusion of the right superior lacrimal punctum (Fig. 1), while the lower punctum was open (Fig. 2). The nasolacrimal duct was patent to syringing. Meibomian glands appeared normal in both eyes. Schirmer's test showed no reduction in tear production. His skin was noted to be very dry, with significant scaling.

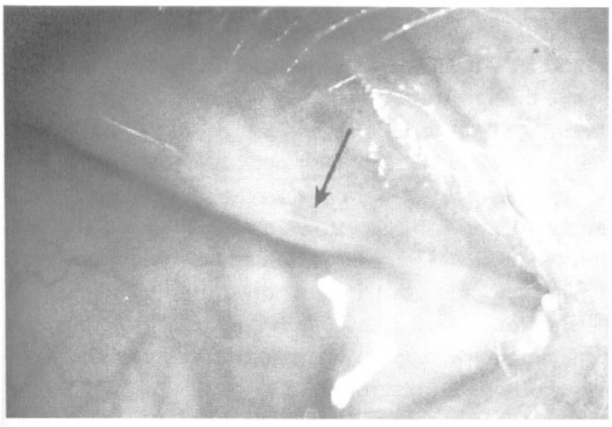

Fig. 1. *Occluded right superior lacrimal punctum (arrow).*

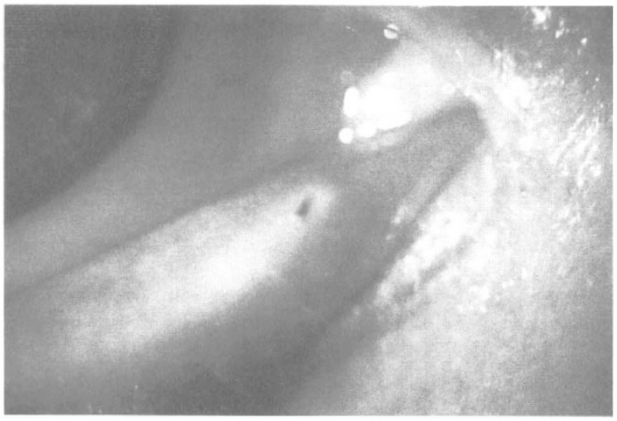

Fig. 2. *Normal inferior punctum.*

In consultation with his dermatologist, the isotretinoin treatment was suspended. The lacrimal punctum remained occluded 6 months after stopping the medication, and his epiphora was only marginally improved. We suggested opening the punctum and intubating the canaliculi with silicone tubing. However, the patient declined further intervention at this stage.

Comment

Although its exact mechanism of action is not known, isotretinoin works in the treatment of acne by reducing sebaceous gland size and sebum production in the skin.[2] It has a similar effect on the Meibomian glands of the eyelids.[3] This is thought to account for the commonly observed ocular side-effects of dry eyes and blepharoconjunctivitis.

This case was unusual because the patient developed a unilateral watery eye instead. An occluded lacrimal punctum accounted for his symptoms. The mechanism by which this had occurred is uncertain. Isotretinoin has been used in the treatment of certain keratinising dermatoses,[4] and *in vitro* studies have demonstrated that isotretinoin can modify epithelial differentiation by modulating keratin expression.[5] It is therefore possible that punctal occlusion resulted from increased keratinisation of the lacrimal canaliculus. Further evidence to support this came from histological studies in acne patients treated with isotretinoin, showing that pilosebaceous units in the skin were sometimes replaced by an epidermal-like cord.[2]

Unlike other ocular side-effects of isotretinoin, most of which are reversible upon cessation of therapy,[1] lacrimal punctal occlusion appears to be irreversible in this case. It remains speculative as to whether early recognition of the problem and discontinuation of treatment might have resulted in spontaneous re-opening of the punctum. Dermatologists and ophthalmologists should be aware that such a complication can occur with isotretinoin.