Figure 1 The patient's right upper eyelid, which usually is ptotic (a), elevates on clenching the teeth (b).

normal bilaterally. The right upper eyelid was ptotic (Fig 1a). No eyelid retraction was noted on opening the jaw or moving it to the left side. The right upper eyelid elevated on clenching the teeth (Fig 1b). The levator functions were normal bilaterally. The pupils were isocoric, and pupillary light reactions were prompt bilaterally. Both eyes appeared otherwise normal. Electroencephalography and computed tomography of the brain and orbits showed normal findings.

Comment

Marcus Gunn phenomenon is identified when the upper eyelid of one eye retracts on opening the jaw or moving it to the opposite side.¹⁻³ In our patient, the right ptotic eyelid elevated with

clenching of the teeth. The movement seen in our patient was similar to those described in patients by Sano.³ Sano showed that electrical stimulation of the ipsilateral internal pterygoid muscle elicited elevation of the involved eyelid. We believe that elevation of the ptotic eyelid with clenching of the teeth, as found in our patient, may be rare.

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Conjunctival haemangiopericytoma

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We report a case of conjunctival haemangiopericytoma (HPC) and discuss the clinical and pathological features and management of this tumour. Haemangiopericytoma most commonly arises in the lower limbs but is of interest to the ophthalmologist as a rare primary or secondary orbital neoplasm.¹ Isolated cases of HPC arising within the lacrimal sac² and choroid³ have been described. There are two reported cases of isolated conjunctival HPC,⁴ and HPC may involve the conjunctiva as an extension of orbital or eyelid neoplasm.

Case report

A 36-year-old white woman presented in May 1989 with a subconjunctival haemorrhage on the medial aspect of the right eye after sneezing.

She had noticed a small lump in the same area for several months (Fig 1). After 3 months, the clinical picture was unchanged and the possibility of a conjunctival vascular malformation or neoplasm was raised. The lesion was excised in September 1989. It was dissected free of a loose attachment to the medial rectus and the base was cauterised. An epithelial inclusion cyst was removed 1 month later. There have been no further problems to date.

Macroscopically the lesion measured 0.5 × 0.4 × 0.3 cm, appeared well circumscribed, and was vascular. Histology showed an unencapsulated benign neoplasm, composed of plump spindle shaped and polygonal cells with indistinct cytoplasmic borders and plump spindle shaped and rounded nuclei. There were several irregular and partly collapsed endothelial lined vascular

Figure 1 Clinical photograph showing a raised, vascular conjunctival lesion.

Figure 2 Histologically, the lesion contains irregular and slit-like endothelial lined vascular spaces set within masses of eosinophilic, spindle shaped, and polygonal tumour cells which have indistinct cell borders. (Haematoxylin and eosin, magnification $\times 73$.)

Figure 3 There is a characteristic pericellular distribution of reticulin. (Reticulin, magnification $\times 36$.)

spaces (Fig 2), some with a 'staghorn' appearance typical of HPC. Reticulin stain showed characteristic pericellular distribution of reticulin (Fig 3). There was no mitotic activity, haemorrhage, or necrosis.

Comment

Haemangiopericytoma is a rare, slow growing vascular neoplasm which may be benign or malignant. The tumour cells resemble pericytes,⁵ and, in common with pericytes, are probably derived from a pluripotential perivascular mesenchymal cell.⁶ Haemangiopericytoma most commonly occurs in the fifth decade and there is no sex predilection. The orbit is the commonest ocular site of occurrence, although the lower extremities are the most prevalent location, and HPC may also arise in the retroperitoneum, pelvis, and in the head and neck region. Recurrence is an ominous sign and the majority of recurrent tumours develop metastases at a later date.⁷ While 80% of central nervous system HPCs, 50% of musculoskeletal HPCs, and 36% of lung and mediastinal HPCs recur, those within the orbit, oral and nasal cavities, and sinuses show a recurrence rate of 4.7% by 1 year and 33% after 5 years.⁸ Malignant lesions metastasise to lung, liver, bone, and mediastinum.

Histopathological features affecting prognosis include mitotic rate, cellularity, cellular pleomorphism, necrosis, and haemorrhage.⁶ Proliferating cell nuclear antigen immunohistochemistry has been reported to be a reliable prognostic indicator, especially in malignant cases.⁹ However, adequacy of surgical excision is of prime importance.^{7,10} In approximately 75% of cases the lesion is well circumscribed or encapsulated.

The differential diagnosis of the benign form of HPC includes benign fibrous histiocytoma, haemangiomas, and glomus tumour. The malignant form may be mimicked by biphasic sarcomas such as synovial sarcoma, as well as by Kaposi's sarcoma and other sarcomas. Haemangiopericytoma and fibrous histiocytoma may be difficult to distinguish, and the same lesion may exhibit features of both, especially in the orbit,⁶ which supports the theory of a common cell of origin. There is no specific immunohistochemical marker for pericytes, although factor XIIIa and HLA-DR (normally expressed in pericytes) have been found in a subpopulation of HPC tumour cells.¹¹ The ultrastructural demonstration of separation of tumour cells from endothelial cells and from each other by a distinct and sometimes multilayered basal lamina is characteristic and mirrors the light microscopic demonstration of reticulin.

Complete local excision including capsule, is the recognised mode of treatment initially and, in our case, appears to have effected a cure. Both radiotherapy and chemotherapy as primary therapy have been attempted for orbital tumours, but without conclusive results.^{10,12}

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Treatment of aphakic malignant glaucoma using Nd:YAG laser posterior capsulotomy

B C Little

Malignant glaucoma is the term introduced in 1869 by von Graefe¹ to describe one of the more serious but rare complications of anterior segment surgery. It is best known following trabeculectomy but has been reported after a wide variety of anterior segment procedures.

It is notoriously refractory to medical treatment alone^{2,3} and surgical intervention has had only limited success.^{4,5} An additional treatment option in pseudophakic eyes or aphakic eyes with an intact posterior capsule is that of short pulsed Nd:YAG laser posterior capsulotomy which is minimally invasive, carries little risk and can re-establish forward flow of posteriorly misdirected aqueous through into the drainage angle of the anterior chamber.^{2,6} Successful use of Nd:YAG posterior capsulotomy can obviate the need for further surgical intervention.

A case is reported of malignant glaucoma developing post-trabeculectomy which persisted despite surgical treatment. Long term pressure control was established following Nd:YAG posterior capsulotomy.

Case report

A 69-year-old woman presented in 1987 with ocular hypertension and narrow drainage angles for which topical β blocker (timolol drops 0.25%) treatment was required the following year. Intraocular pressure (IOP) control was unsatisfactory and unresponsive to bilateral 360 degree argon laser trabeculoplasty. Adjunctive topical treatment using an adrenergic agonist (dipivefrin drops) did not improve IOP control (30 mm Hg bilaterally) and automated perimetry revealed an early arcuate scotoma in her right eye. A right trabeculectomy was performed in September 1992.

On the first postoperative day she had diffuse shallowing of the anterior chamber with an IOP

of 38 mm Hg and a diagnosis of malignant glaucoma was made. The following day a limited pars plana core vitrectomy was performed and the anterior chamber reformed internally through a surgical cyclodialysis. On the first postoperative day a deep anterior chamber was present with a normal IOP. Two days later a total hyphaema was present together with a peripherally flat anterior chamber and raised IOP. Maximum topical and systemic treatment reduced the IOP to 25 mm Hg. The hyphaema slowly resorbed over the following 2 weeks to about 30% of the corneal diameter, but the malignant glaucoma persisted despite full cycloplegia. At this stage she was referred for further management.

Her right IOP was 18 mm Hg on full medical treatment and her acuity 6/12 with a healthy disc. There was marked diffuse conjunctival and episcleral hyperaemia and the anterior chamber depth measured 1.6 mm centrally (Haag-Streit AC depth meter) but was peripherally closed and no drainage bleb was present overlying the trabeculectomy site. Over the following 4 days the IOP remained under 20 mm Hg on topical and systemic treatment and the inflammation settled on treatment with topical steroid although the anterior chamber remained peripherally flat.

B scan ultrasound showed ciliary body enlargement in the right eye but not in the unoperated left eye. The axial length of the right eye was difficult to measure accurately but that of the left eye was 21.1 mm. Her preoperative refraction was not hypermetropic and neither was there anisometropia in her reading prescription.

She was discharged and reviewed 2 weeks later when the anterior chamber was still flat with an IOP of 30 mm Hg and an optically clear zone was noted behind her lens, presumed to be seques-

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