and 16% in aphakic patients.[2] However, simultaneous retinal detachment of both eyes is a rare finding. An annual incidence of 0.35 patients with bilateral simultaneous retinal detachment per 100 000 populations was estimated recently in Norway.[3] These patients were significantly younger. They are usually myopic with multiple round retinal holes.[4]

Unilateral and bilateral retinal or vitreous haemorrhages are common features secondary to subarachnoid haemorrhage. They occur in 3–5% of cases of subarachnoid haemorrhages[5] and usually come to the attention of an ophthalmologist during recovery after the patient regains consciousness. Any patient presenting with retinal or vitreous haemorrhages associated with neurological symptoms such as headache, nausea, or altered consciousness should be investigated to exclude intracranial haemorrhages; however, bilateral vitreous haemorrhages and headache are not pathognomonic of Terson's syndrome. A non-diabetic vitreous haemorrhage most frequently arises as a result of vitreous separation. Our case demonstrates the importance of careful inspection as vitreous haemorrhage clears together with ultrasound B-scan to exclude rhegmatogenous retinal detachment even when the cause of vitreous haemorrhage is not considered to be related to vitreous separation.

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Sir,

Extrascleral extension of choroidal malignant melanoma following transpupillary thermotherapy
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Several studies have reported on the effectiveness of transpupillary thermotherapy (TTT) for the treatment of small-sized choroidal melanomas.[1–4] Significant complications owing to the TTT include tumour recurrence,[2,4] vascular occlusions,[5] and retinal detachment.[4] In this report we present a case of small-sized choriodal melanoma treated with TTT, which showed tumour recurrence in the form of extrascleral extension requiring modified enucleation.

Case report

A 64-year-old man presented in October 1996 with reduced vision and metamorphopsia in the left eye. The medical and family history was noncontributory. On examination, the corrected visual acuity was 20/20 in the right eye and 20/80 in the left eye. The right was normal. On ophthalmoscopic examination of the left eye, a small choroidal melanocytic lesion (2.5 mm × 0.5 mm) with overlying orange pigment and minimal subretinal fluid was identified in the macular region (Figure 1a). Owing to the presence of four out of five risk factors predictive of growth,[6] various options including observation and treatment were offered. It was mutually elected to proceed with the TTT (2 mm spot size, 450 mW power, 1 min duration, five spots).

For the next 20 months, the tumour appeared well regressed (Figure 1b). In June 1998, a marginal recurrence was suspected and additional TTT was performed TTT (3 mm spot size, 700–900 mW power, 1 min duration, 14 spots). The tumour appeared regressed for a period of another 20 months when he developed neovascularization of the disc and mild vitreous haemorrhage. In January 2001, further TTT was performed for marginal recurrence (3 mm spot size, 450 mW power, 1 min duration, two spots). There was no evidence of extrascleral extension at that time. Subsequently, the patient was followed only ophthalmoscopically and there was no evidence of recurrence. On a recent ophthalmoscopic examination (April 2002), the tumour appeared regressed and stable (Figure 1c). However, on B-scan ultrasonography, a 5 mm well-circumscribed nodular extrascleral extension along the base of the original tumour was noted (Figure 1d). The globe and the nodular extrascleral extension were removed by modified enucleation (Figure 1e).

Histopathologically, retina appeared atrophic and was replaced by a fibrotic membrane (Figure 1f).

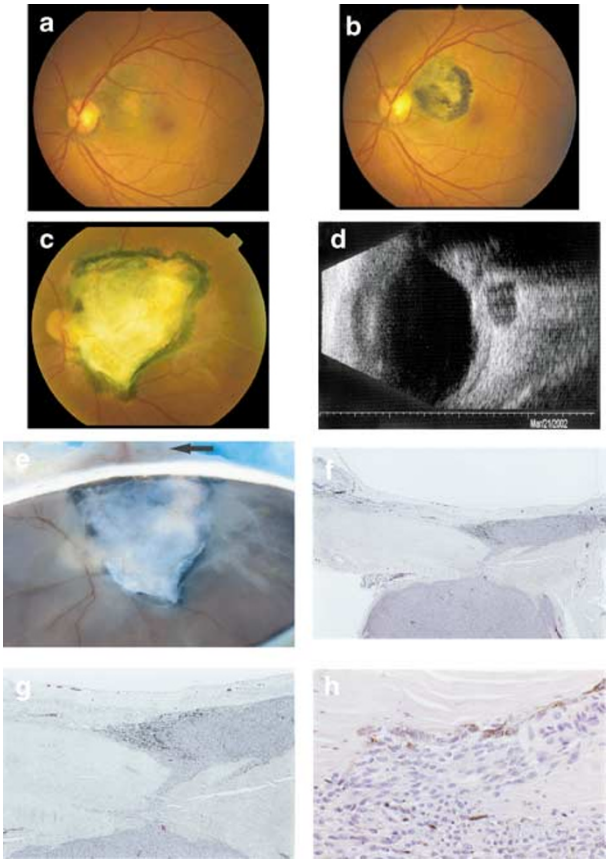

Figure 1 (a) A 64-year-old male with small-sized choroidal melanoma left eye. (b) Fundus appearance following a single session of TTT. The tumour appears as an area of chorioretinal atrophy. (c) Fundus appearance following three sessions of TTT. The treated site has a fibrotic membrane with fine retinal neovascularization. (d) B-scan ultrasonograph showing a nodular extrascleral extension along the base of the original tumour. (e) Gross photograph showing the posterior pole chorioretinal scar adjacent to the optic disc, at the site of thermotherapy. Note the extrascleral pigmented nodule (arrow). (f) Photomicrograph showing the posterior pole of the eye, with an extensive chorioretinal scar at the site of thermotherapy (between arrows). Residual deep choroidal tumour (c) extends via a scleral canal to the extrascleral tumour nodule (n). (H&E $\times 5$). (g) Higher magnification shows that the chorioretinal scar (top) contains no tumour cells. (H&E $\times 10$). (h) Details of the posterior choroidal spindle cell malignant melanoma (top) invading the sclera (s). (H&E $\times 100$).

Higher magnification shows that the chorioretinal scar contains no tumour cells (Figure 1g). The residual deep tumour was lightly pigmented spindle-type choroidal melanoma with placoid area of viable tumour cells and peripheral areas that were rich in melanophages (Figure 1h). Choroidal melanoma cells extended through the emissiary canal of short posterior ciliary artery to the extrascleral component (Figure 1f).

Comment

TTT-induced hyperthermia in the range of 45–60° C is effective in inducing necrosis within choriodal melanoma to a depth of about 4 mm.[7] The overlying retina undergoes well-demarcated atrophy but the underlying sclera is resistant to hyperthermia.[7] Initial response of choroidal melanoma following TTT can be gratifying but the risk of tumour recurrence should always be considered as the risk progressively increases from 4% at 1 year to 22% at 3 years.[2] The mean time to recurrence is almost 2 years after the initiation of TTT; therefore, careful long-term follow-up of these patients is needed.[2] The tumour recurrence can be managed by additional thermotherapy, plaque radiotherapy, or enucleation based upon the extent of the recurrent tumour and the visual potential.

Histopathologically, the presence of intrascleral choroidal melanoma has been noted in 50% of eyes enucleated for large-sized melanoma.[8] Similar observations have been made in eye enucleated following TTT.[9,10] In a study of 10 eyes enucleated because of TTT-induced complications, tumour cells were evident intrasclerally in three eyes with extrascleral extension in four eyes.[10]

As demonstrated by our case, it must be realized that tumour recurrence following TTT can occur extrasclerally and may not be detectable by ophthalmoscopic examination. Juxtapapillary choroidal melanoma may be at a particularly high risk of developing extrascleral extension following TTT. Therefore, patients treated with TTT should undergo careful B-scan ultrasonography to detect extrascleral extension even if they appear regressed by ophthalmoscopic examination. Perhaps, a combination of TTT and plaque radiotherapy (sandwich therapy) will reduce the risk of tumour recurrence following TTT.[11,12]

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Sir,

Tadpole pupil

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We report an unusual case of episodic mydriasis with segmental pupillary distortion.

Case report

A 33-year-old lady presented complaining of an intermittently irregular right pupil. The pupil distortion usually lasted for a few minutes and, despite being painless, was often accompanied by a vague change in periocular sensation. The symptom occurred sporadically, sometimes with several weeks in between episodes, but occasionally happening several times on the same day. There were no other visual symptoms and no significant past ocular history. General health was good and no regular medications were taken.

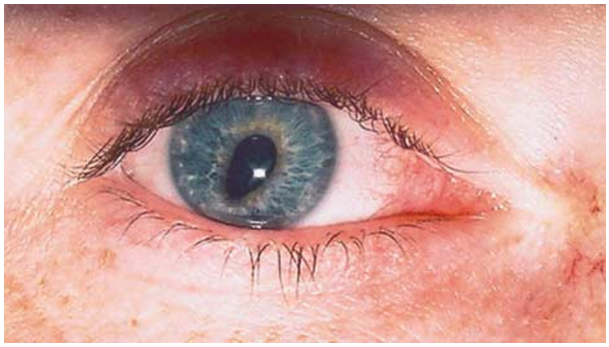

Figure 1 Tadpole-shaped pupil.

On examination, visual acuity was normal bilaterally. There was a 1 mm right ptosis with mild anisocoria, the right pupil being 1 mm smaller in normal room illumination. In dim lighting, the discrepancy in pupillary size increased to 3 mm. Pupil reactions to light and accommodation were considered normal. No other ocular or neurological abnormalities were detected.

Gutt. Phenylephrine 10% in both eyes appeared to improve the ptosis and caused more dilatation to the right pupil (7 mm compared to 4 mm on the left). A provisional diagnosis of a variant of right Horner's syndrome was made. A chest X-ray and magnetic resonance imaging of the brain and orbits were both normal. Some weeks later, the patient captured a picture of the pupillary distortion (Figure 1) confirming the diagnosis of a tadpole-shaped pupil.

Comment

Thompson *et al*[1] gathered and reported on 26 cases of intermittent pupillary abnormality, one segment of iris being temporarily pulled to a peak before returning to normal. The patients were predominantly women, aged 28–48 years. Most cases were accompanied by a degree of visual blurring along with unusual sensations such as an ache, a 'ping' in the eye, or chill on the face.

The brief pupil irregularity was seldom witnessed by a physician. However, on the rare occasions when an episode occurred during an examination, a peaked segment that reacted poorly to light was observed, the rest of the pupil constricted normally. Assessing pupillary behaviour in between episodes, a large number of patients had signs consistent with Horner's syndrome and to a lesser extent Adie's pupil.