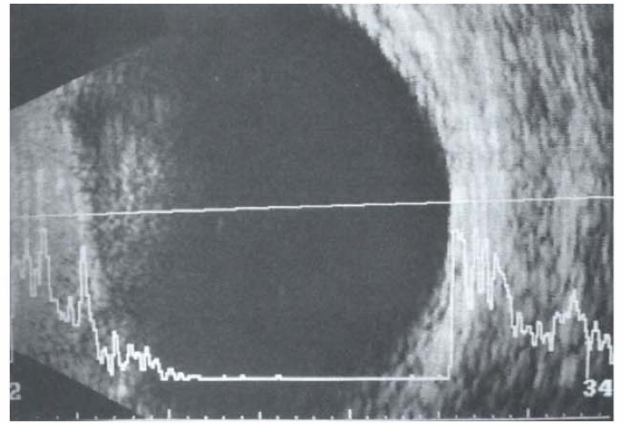


(a)



(b)

Fig. 2. (a) Fundus view of the right eye demonstrates the regressed choroidal mass 3 months after transpupillary thermotherapy. (b) B-scan ultrasonography of the right eye 3 months after transpupillary thermotherapy. The mass has been totally flattened.

As an alternative modality, plaque brachytherapy has been employed in 36 patients with uveal metastasis and provided successful tumour control in 98% of cases.³ Tumours measuring 16 mm or less at the base and 10 mm or less in thickness received brachytherapy with an average hospitalisation of 3 days.³ According to the authors, the major drawbacks of this technique were the surgery itself and local anaesthesia.³

Infrared diode laser TTT is currently offered to some selected small juxtapapillary and other posterior pole melanomas and has produced encouraging short-term results.⁶ TTT exerts its effects through disruption of mitochondria and ischaemic necrosis up to a depth of 3.9 mm in choroidal melanomas.⁷ Our experience with this patient suggests that TTT can be a safe option in the management of symptomatic choroidal metastatic tumours of moderate thickness and a minimal amount of subretinal fluid. This technique may positively affect the quality of life of the patient by avoiding surgery and hospitalisation for brachytherapy and frequent hospital visits for fractionated EBR and its inherent side effects. Further studies with a large number of patients are needed to define the exact niche and indications of TTT in the setting of choroidal metastasis.

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Sir

Indirect delivery of argon laser to disperse premacular haemorrhage in a recumbent visually handicapped patient with Terson's syndrome

Intracranial bleeding as a cause of vitreous haemorrhage was first described by Terson in 1900.¹ Terson's syndrome (vitreous haemorrhage in association with subarachnoid haemorrhage) and other intraocular haemorrhages occur in 20–40% of patients with subarachnoid haemorrhage.² Patients are often drowsy or comatose for several hours to several days after the onset of acute symptoms. Visual incapacitation may therefore remain unrecognised for long periods. We report on a patient who developed visual symptoms after an acute subarachnoid haemorrhage from a ruptured cerebral aneurysm.

Our patient was unusual because, despite having an impaired level of consciousness, the sudden and severe visual incapacitation was so intolerable that it caused extreme anxiety and agitation, which resulted in difficulty with both monitoring and nursing care in the immediate post-operative period. This problem resulted

in the neurosurgeons seeking an ophthalmology opinion earlier than would normally occur, with the hope that visual restoration would improve the patient's mental status and hasten her general recovery post-operatively.

A vitrectomy would have been the ideal method of procuring immediate visual recovery. However, clinically the patient was not fit to undergo further surgery under either local or general anaesthesia.

Case report

A 42-year-old woman with Terson's syndrome was referred by the neurosurgeons due to significant bilateral visual loss associated with a subarachnoid haemorrhage. One week prior to ophthalmic presentation, she had undergone major surgery in which a basilar artery aneurysm was embolized.

At presentation her visual acuities were 0.5/60 in the right eye and 1/36 in the left. Her anterior segments and intraocular pressures were normal. Funduscopy showed a diffuse vitreous haemorrhage with minimal detail of the underlying retina in the right eye, and a boat-shaped subhyaloid haemorrhage, which obscured the macula, in the left eye (Fig. 1).

Drainage of the subhyaloid haemorrhage was achieved by creating a focal opening between the subhyaloid space and the vitreous cavity, using indirect argon laser photocoagulation. An area near the inferior margin of the anterior surface of the subhyaloid haemorrhage was targeted. The laser power was increased gradually, until a reaction was observed. The laser was fired repeatedly, at the same spot, until blood was seen to flow from the treated site, into the vitreous cavity. The laser parameters used were $0.1 \text{ s} \times 100 \mu\text{m} \times 0.3\text{--}0.5 \text{ W} \times 5 \text{ shots}$.

The patient was then positioned, left cheek to pillow, for 6 h, to aid further drainage of blood from the subhyaloid space into the vitreous cavity. The patient experienced an immediate and significant visual improvement. This resulted in a dramatic improvement in her mental state, making subsequent management both by the nursing and medical staff easier.

Two months later, her visual acuities were 6/12 right eye and 6/18 left eye. Funduscopy showed a more diffuse vitreous haemorrhage in the right eye, when compared with findings at presentation. The left eye showed fine perifoveal pigmentation, a laser scar marking the site of treatment, and an organised haemorrhage in the inferior part of the vitreous (Fig. 2). The patient was extremely delighted with her visual progress.

Comment

Screening for intraocular haemorrhage in patients with subarachnoid haemorrhage is recommended because it is of prognostic importance in the eventual recovery of the patient.

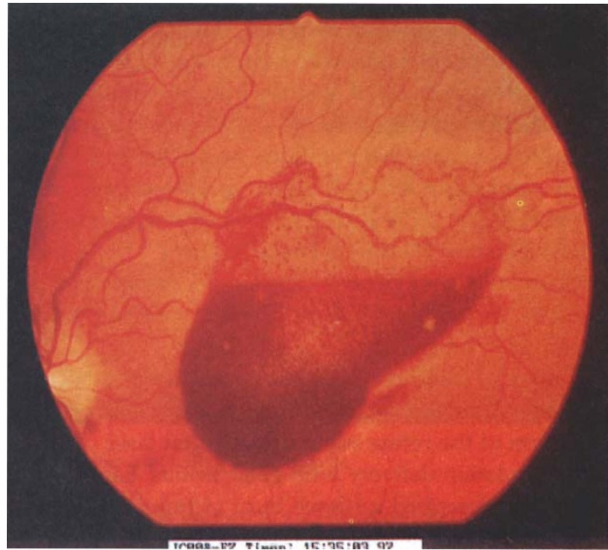


Fig. 1. Photograph showing boat-shaped subhyaloid macular haemorrhage prior to indirect laser photocoagulation in the left eye.

Pfausler *et al.*³ reported a case fatality of 90% in patients with Terson's syndrome compared with 10% in patients with subarachnoid haemorrhage without Terson's syndrome. In Terson's syndrome (vitreous and subarachnoid haemorrhage) conservative management is the initial management of choice as retrospective studies show a high incidence of spontaneous visual recovery after 6–12 months.²

This would have been the preferred management option in our patient; however, due to the patient's mental status and reason for referral we felt conservative management was inappropriate. Our next option was Nd:YAG laser photodisruption of preretinal haemorrhage as described recently by Iijima *et al.*⁴ However, our patient's neurological symptoms included frequent episodes of vertigo. She was therefore unable to sit upright at a slit-lamp and a horizontally mounted Nd:YAG laser machine was not available.

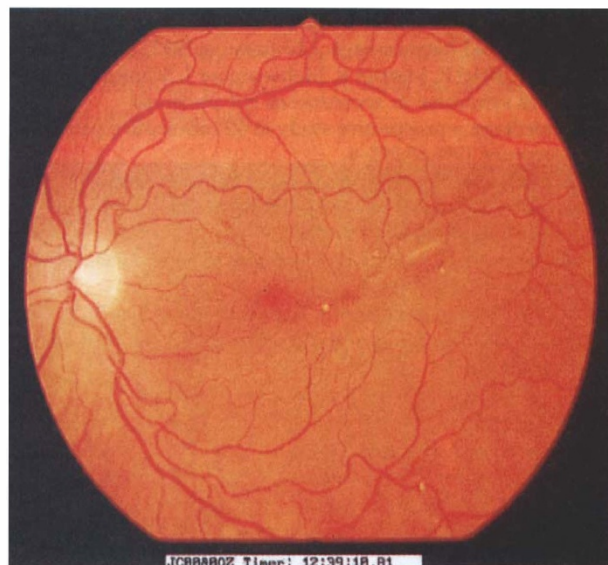


Fig. 2. Photograph of the left macula 2 months after indirect laser photocoagulation of subhyaloid macular haemorrhage. Note the retinal scar infero-temporal to fixation.

The ideal option was a treatment that was readily available and could be delivered safely and effectively in the recumbent position. Argon laser photocoagulation via the indirect ophthalmoscope was therefore our procedure of choice. We found the procedure quick, effective and inexpensive. It is also easily performed by ophthalmologists experienced in the use of argon laser photocoagulation via the binocular indirect ophthalmoscope. We propose that similar patients can be treated by this method before referral to a vitreoretinal surgeon for vitrectomy.

Dellaporta⁵ described a similar procedure in which evacuation of subretinal haemorrhage was achieved by perforation of the retina using direct argon laser photocoagulation delivery with good results. Sahu and co-workers⁶ described a stretch burn technique which apparently reduces the size and energy level requirement of the penetrating burn. We did not find this procedure necessary; however, we suspect that more than one penetrating burn is required to enable the blood to flow into the vitreous cavity.

The relative ease and apparent efficacy of this technique are encouraging; however, in bilateral macular haemorrhages the patient may find it difficult to fixate and thus require a local anaesthetic to reduce ocular movement and hence inadvertent retinal burns. Possible complications of our method of treatment include choroidal haemorrhage, inadvertent foveal burns, retinal breaks and persistent vitreous haemorrhage which may be further complicated by a tractional retinal detachment or proliferative vitreous retinopathy. Further research is therefore necessary before this technique is adopted as a safe alternative in the treatment of subhyaloid macular haemorrhage regardless of the underlying cause.

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Sir

Safe management of a late-onset bleb leak with a needling technique

Bleb leaks may occur as an early or late complication of glaucoma filtering surgery, and are often recalcitrant to therapy. Spontaneous late bleb leaks occur more frequently in glaucoma filtering surgery following adjunctive use of the antimetabolites mitomycin C¹ or 5-fluorouracil, and with full-thickness procedures. We describe a new 'repair technique' in a patient with a late-onset leaking bleb.

Case report

A 48-year-old woman with primary open angle glaucoma in the right eye had undergone trabeculectomy with an antiproliferative agent 3½ years previously. Trabeculectomy was performed with a limbal-based flap. A cellulose sponge containing mitomycin C 0.2 mg/dl was applied to the eye between the sclera and conjunctiva for 3 min. After the application of a second sponge, the conjunctiva was irrigated with at least 250 ml balanced salt solution. A 4 mm lamellar scleral flap was prepared at a uniform depth of approximately one-half of scleral thickness. After entering the anterior chamber, a Kelly-Descemet punch (Storz Instruments, St Louis, MO) was used to excise the trabeculum, cornea and scleral tissue. A peripheral iridectomy at the same site was performed. Five 10-0 nylon sutures were used to close the scleral flap. The conjunctival incision was closed with running locked 10-0 nylon sutures. The post-operative intraocular pressure was well controlled at approximately 15 mmHg in the operated eye for 2 years after the operation. The post-operative best corrected visual acuity was 20/20 with a refractive error of -9.0 D. The visual acuity and visual field defects were unchanged after surgery.

Two years later, the patient suddenly complained of blurred vision and epiphora in the right eye, which lasted for a few days. In the right eye, intraocular pressure was 5 mmHg. Low intraocular pressure continued for about 2 weeks. Choroidal and retinal folds were found at fundoscopy and hypotonic maculopathy was diagnosed. Slit-lamp examination showed a slightly shallow anterior chamber and a positive Seidel test from the inferior portion of the bleb (Fig. 1). Despite initial prescription of aqueous suppressant eye drops to reduce leakage and permit surface epithelialisation and initiation of eye patching (including tamponade glaucoma shell), aqueous leakage from the filtering bleb persisted. Intra-bleb injections of autologous blood and fibrin glue were also tried twice to close the button hole of the leaking bleb without any success.

Finally, a previously reported transconjunctival bleb needling technique was carried out.² This technique involves elevation of the conjunctiva off the surface of the globe with balanced salt solution and anaesthetic using a 27 gauge needle. The underlying episcleral-Tenon's capsule scarring was then incised extensively with a small gauge needle far away from the ischaemic bleb. We