LETTERS TO THE JOURNAL

Sir,

Giant Retinal Tear Caused by Hydraulic Injury

Giant retinal tears were originally defined as retinal tears greater than 3 clock-hours in circumferential extent.[1] Subsequently Scott[2] pointed out that the essential feature of a giant tear was independent mobility of the posterior flap.[2] The association of giant retinal tears with blunt trauma is now well recognised.[3] Machines capable of pumping liquid under pressure of up to 69 MPa (10 000 pounds per square inch) are now in frequent use. High-pressure injection injuries from such machines have been described recently in the orbital soft tissue.[4] To our knowledge no hydraulic injury has caused a giant retinal tear. We report such a case.

Case Report

The patient, a 36-year-old engine fitter, described how a diesel piston engine had been cranked without ignition in order to purge the cylinders of any water after cleaning. As a result a high-pressure jet of water was expelled through one of the injector ports (cylinder dimensions: 25 cm; 12.5 cm; the injector port 6 mm in diameter) striking the patient's right eye 2 m away. There was no past ophthalmic or medical history of note.

The patient was alert and orientated with best visual acuities of 6/60 right and 6/5 left. The following injuries were noted on the right side: medial upper lid laceration; corneal oedema with folds in Descemet's membrane; a diffuse hyphaema with 270° angle recession (temporal sparing).

Over the ensuing 3 days the corneal oedema and hyphaema settled with the visual acuity improving to 6/24 right. Funduscopy then revealed a giant retinal tear from 10 o'clock to 2 o'clock associated with avulsion of the vitreous base (Fig. 1) with slight lifting of the posterior edge. The retina was otherwise flat. After examination by J.D.S., cryotherapy was applied to the tear with the patient under general anaesthesia. The patient was confined to bed for a further 4 days. Review on the tenth post-operative day revealed visual acuity of 6/9 and flat retina with good reaction to the cryotherapy (Fig. 2).

Discussion

The proposed mechanisms for the formation of blunt traumatic giant retinal tears involve a transient reduction in axial length during impact. Scott[2] had suggested that retrodisplacement of the cornea and aqueous drives the lens–iris diaphragm back against the anterior vitreous face away from its adherence to the vitreous base. Enucleated pig eyes photographed during blunt impact demonstrated an increase in length of equatorial plane simultaneous with the reduction in axial length. These authors[5] sug-

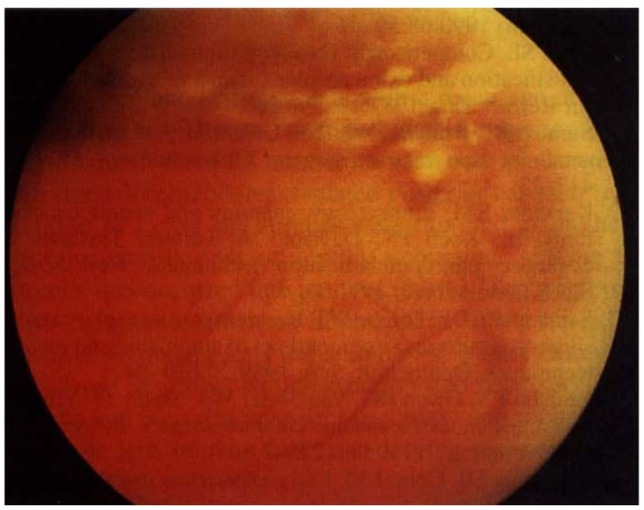

Fig. 1. *Giant retinal tear at the ora serrata extending from 10 o'clock to 2 o'clock and associated with avulsion of the vitreous base and slight lifting of the posterior edge.*

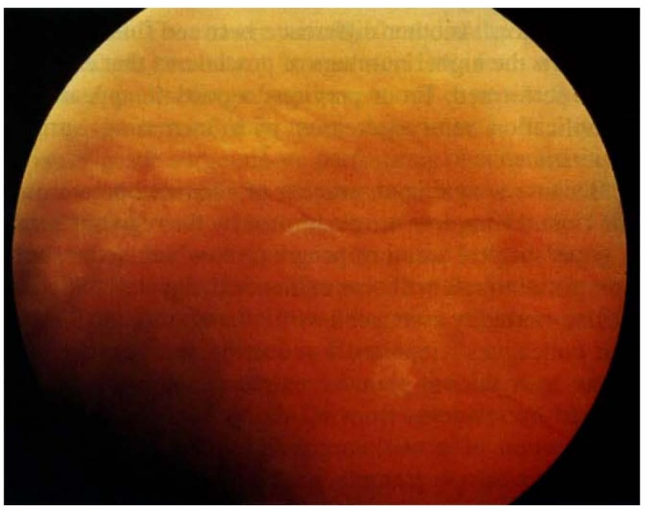

Fig. 2. *Retinal reaction 10 days after application of cryotherapy to the site of the tear.*

gested that the vitreous was less deformable than the sclera and hence explained the traction tear at the vitreous base. Others[6] found that velocity of corneal displacement leading to high-speed shock waves may be more important than total kinetic energy imparted to the eye. In the case we report it must be assumed that the jet remained narrow since there were no injuries on the face. All the available energy would therefore have been delivered to the eye.

The avulsion of the vitreous in this case was restricted to the area of retinal tear with the remainder of the posterior hyaloid face attached to the retina. This explains the lack of progression to retinal detachment over the 4 days prior to surgery and meant that neither buckling not vitrectomy and tamponade was necessary.

This case illustrates the importance of adequate eye protection when working with machines capable of producing high-pressure jets. It also emphasises the need for careful examination of any eye injured by such a jet with scleral indentation as soon as possible.

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Sir,

Pyogenic Granuloma or Lobular Capillary Haemangioma

The presentation of 'pyogenic granuloma' can be quite dramatic as these lesions may increase in size very rapidly and not uncommonly bleed. The lesion is neither 'pyogenic' (as there is no evidence that it is caused by a specific infective organism) nor a 'granuloma' (as mononuclear, epithelioid and giant cells are not a feature of the condition). The clinical diagnosis is often incorrect. This may well be to some extent a consequence of the misnomer or it may be due to the fact that the condition is poorly documented in the ophthalmic literature. We present a case of a large 'pyogenic granuloma' affecting the left upper lid. We propose altering the nomenclature to 'polypoid capillary haemangioma' or 'lobular capillary haemangioma', a histopathologically more accurate term.

Case report

A 20-year-old African woman presented with a growth on the left upper lid margin which had developed over the previous 3 weeks. There had been a rapid increase in size and the lesion had bled on a few occasions. There was no history of trauma or any previous lid problems. The lesion was approximately 15 mm in diameter, pedunculated, smooth and spherical and looked vascular (Fig. 1). Excision was performed under local anaesthetic and there was no significant bleeding. Histopathological examination confirmed a diagnosis of 'pyogenic granuloma'.

Discussion

'Pyogenic granulomas' occur on the skin or mucosa. The lesions may be pedunculated or sessile and are usually smooth, vascular and often bleed.[1] The rapid rate of growth and the tendency to bleed can be alarming.[2] It is therefore important to make the correct diagnosis in order to reassure the patient and manage the condition appro-

(*a*)

(*b*)

Fig. 1. *(a), (b) Pyogenic granuloma.*