LETTERS TO THE EDITOR

Sir,

We were very interested in the case report by Callender *et al.*[1] of Valsalva retinopathy in pregnancy and would like to describe two further cases and discuss the implications for management Retinal and pre-retinal haemorrhages as a result of the Valsalva manoeuvre were first described by Duane[2] and are thought to be due to a rapid rise in venous pressure causing sudden rupture of either normal or abnormal superficial retinal capillaries.[3] Physiological changes in pregnancy mean that Valsalva manoeuvres are likely to be both more frequent and of greater intensity and it is not unreasonable to expect an increased risk of Valsalva retinopathy. Pregnancy ends with the extreme Valsalva manoeuvres of normal labour and the consequent risk of recurrence of the retinopathy.

Case 1

A 27-year-old Caucasian woman presented with a 2 day history of decreased vision in her right eye. Visual acuity was counting fingers in the right eye and 6/5 in the left. Pupillary reactions, tonometry and anterior segments were normal. Binocular indirect ophthalmoscopy showed a subhyaloid haemorrhage of approximately 3 disc diameters centred on the fovea with a well-defined fluid level. At the margins there was also some sub-inner limiting membrane haemorrhage. All the vasculature was normal in both eyes and there was no further abnormality on 360° indented fundal examination or in the contralateral eye. The patient was 31 weeks into her second, previously uneventful pregnancy. There was a history of constipation during the pregnancy but no other significant past medical history and she was on no medication. Blood pressure was 140/90 mmHg and urinalysis was normal. Full blood count, urea and electrolytes, glucose and clotting studies were all normal. A diagnosis of Valsalva retinopathy was made and conservative management of rest, observation and avoidance of strenuous activities recommended. The possibility of recurrence was discussed with the patient, and she wished to undertake normal labour. Eight weeks later the haemorrhage was still present, though smaller, and she underwent a normal labour with no epidural and no complications. At her last ophthalmic review, 10 months following the haemorrhage, her vision had improved to 6/18 in the right eye. The haemorrhage had completely resolved and the vasculature remained normal. The poor visual outcome was accounted for by retinal pigmentary changes at the macula.

Case 2

A 35-year-old Caucasian woman presented with a history of floaters, superior scotoma and decreased vision in the left eye of a few hours' duration, following an episode of lifting. Her vision was recorded as 6/5 right eye and 6/9 left eye. Pupillary reactions, tonometry and anterior segments were normal. Binocular indirect ophthalmoscopy showed a 2 disc diameter subhyaloid haemorrhage inferotemporal to the disc that had ruptured through the posterior hyaloid into the vitreous. There was also some sub-inner limiting membrane haemorrhage but no further abnormality on 360° indented fundal examination or in the contralateral eye. She was 36 weeks pregnant in her third pregnancy, the first having been uneventful and the second ending in spontaneous first trimester abortion. Her blood pressure was 120/70 mmHg, urinalysis was normal, and full blood count, urea, electrolytes, glucose and clotting studies were all normal. A diagnosis of Valsalva retinopathy was made and conservative management again recommended. The risk of recurrence was discussed and the patient chose to undertake normal labour. Four weeks after the haemorrhage she underwent a normal labour without epidural or other intervention and had no complications. At her last ophthalmic review, 10 months after the haemorrhage, her vision was back to 6/5 with no sequelae apart from a few vitreous floaters. There was no vascular abnormality.

Discussion

Valsalva manoeuvres have been linked to several other ocular manifestations including subconjunctival haemorrhages, periorbital skin petechiae, orbital haemorrhage and subperiosteal haematoma.[4,5] A similar pathogenic mechanism has been proposed for bungee jumper's retinopathy.[6] Most cases of Valsalva retinopathy resolve with few sequelae but pigmentary changes, as in our first case, may result in permanent visual loss.[4] We were concerned that

despite apparently normal vasculature the haemorrhage may recur during labour. Possible interventions included epidural anaesthesia (which considerably reduces central venous pressure) and/or operative delivery.

In the discussion following Duane's original paper[2] Norton described a case of Valsalva retinopathy in a pregnant woman. Neither in his case nor Callender's case nor our two cases did the retinopathy recur, despite the patients undergoing normal labour. We believe that there is no evidence at present that obstetric intervention is necessary in labour in order to prevent recurrence of the haemorrhage. It is perhaps surprising that in the extreme Valsalva manoeuvre of the second stage of labour this retinopathy has not been reported, though orbital Valsalva haemorrhages have.[5]

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Sir,

We read with interest the report by Meaney and Ogunsola of a child with orbital tuberculosis.[1] We report a similar case of an orbital mass in a young child due to tuberculosis.

A 10-year-old Somalian girl presented to the ophthalmic department with a right upper lid lump. This had first been noted 4 months previously following minor lid trauma. She complained of ptosis and occasional diplopia. She was systemically well and had no past medical history of note. On examination, she had a 30 mm × 25 mm tender, fluctuant, transilluminant mass in the superotemporal aspect of the right orbit (Fig. 1). Her visual acuities

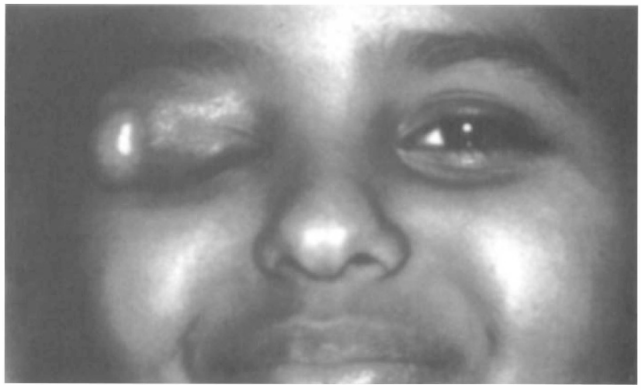

Fig. 1. *The patient at presentation, showing the right upper lid lump.*

were 6/9 bilaterally and 2 mm of right ptosis was observed. She did not have proptosis but abduction of the right eye was limited. The pupils were normal and visual fields were full. She was apyrexial and had no lymphadenopathy. The remainder of the examination was unremarkable.

Her erythrocyte sedimentation rate was raised at 28 mm/h but full blood count, urea and electrolytes, glucose, liver function tests and thalassaemia screen were within normal limits. A chest radiograph was normal but a tuberculin test was positive. An orbital CT scan showed a large bilobed soft tissue mass in the lateral wall of the right orbit displacing the globe downwards and medially. There was irregular destruction of the superior and lateral orbital walls with some hyperostosis (Fig. 2).

As the mass was about to discharge, a decision was made to perform a controlled surgical drain and the aspirate was cultured, growing *Mycobacterium tuberculosis.* Our paediatric colleagues advised consultation with a chest physician. As a result the child was treated with Rifinah 150 (Merrell; 3 tablets daily), pyrazinamide 20 mg/kg daily and ethambutol 25 mg/kg daily for the initial 60 days, followed by 15 mg/kg

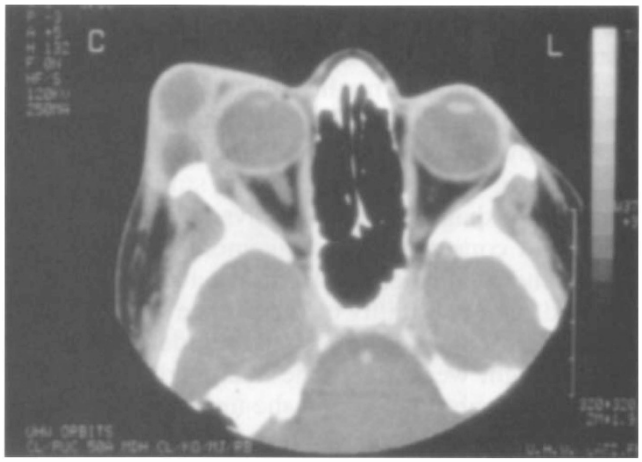

Fig. 2. *CT scan showing a large soft tissue mass in the lateral wall of the right orbit.*