Eye (1990) **4**, 765–770

Letters to the Journal

Sir,

Optic neuritis occurs infrequently in childhood.[1] It is usually bilateral with papillitis a prominent feature.[1] We report on a case of a retinal arteriolar occlusion in a ten year old girl with optic neuritis.

Case History

A 10 year old caucasian girl presented with a two day history of a painful red left eye. The vision in her left eye had been reduced for the preceding 10 days. The patient was otherwise well and there was no evidence of any systemic illness.

On presentation visual acuity was 6/6 right and H.M. left. Ocular findings were: the right eye showed no abnormality. The left eye was photophobic and painful on movement. The bulbar conjunctiva was injected and there was corneal oedema. There was a left relative afferent pupillary defect. The intraocular pressure was 12 mmHg in the right eye and 42 mmHg in the left. The anterior chamber was deep and there was no evidence of lens subluxation. Although hazy, fundal examination revealed a swollen left optic disc and a whitish lesion extending temporally from the disc margin. There was no evidence of a choroidal detachment. Systemic acetazolamide was commenced with subsequent lowering of the left intraocular pressure to 12 mmHg and complete resolution of the corneal oedema. Visual acuity improved to 1/60. there was a complete loss of colour discrimination. Further examination of the fundus now revealed a papillitis and an area of retinal whitening extending 3.3 mm temporally from the optic disc in an area supplied by a retinal arteriole (Fig. 1). A small loop was present along the course of that vessel near the edge of the optic disc (arrow in Fig. 1). There was vessel tortuosity and retinal folds extending temporally from the optic disc. There were no peripheral retinal or disc haemorrhages. A mild flare was present in the anterior chamber with the occasional cell in the anterior vitreous, both of which cleared spontaneously over the subsequent three days.

Investigations two days after presentation included a full blood count, blood glucose, erythrocyte sedimentation rate, protein electrophoresis, toxoplasma antibody, viral antibody titres, an autoantibody screen, chest X-ray and a contrast enhanced computerised

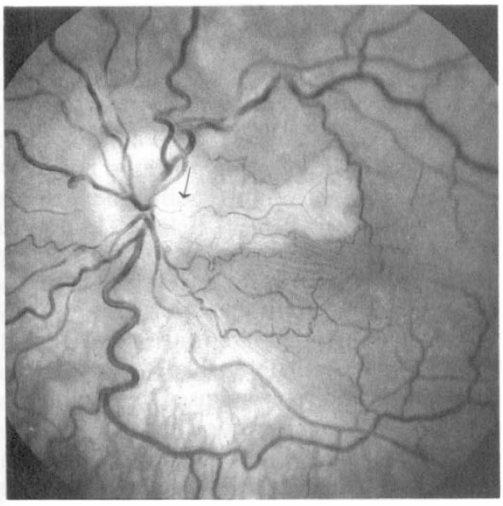

Fig. 1. *A swollen optic disc with an area of retinal whitening. Arrow indicates arteriolar loop.*

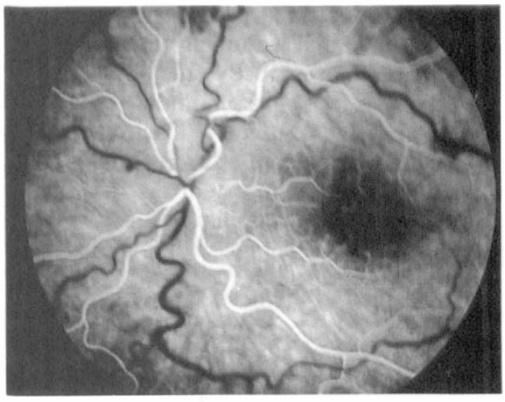

Fig. 2. *Fluoroscein angiogram showing perfusion of the retinal arteriole.*

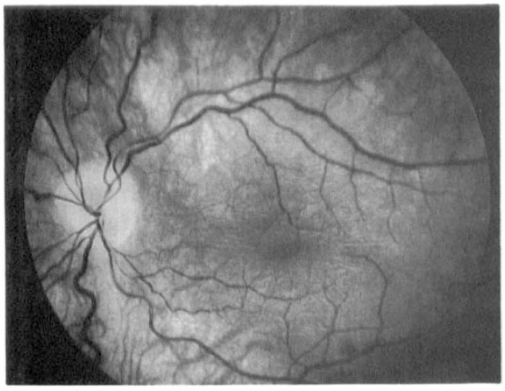

Fig. 3. *The optic disc is now pale.*

tomogram of the orbits and brain. All of these investigations were within normal limits. Visual fields were inconsistent but generally constricted in the left eye with a central scotoma. A pattern reversal visual evoked response (VER) was reduced in amplitude in the left eye as compared to the right (7.2 uv, 12.5 uv). The P100 of the whole field VER from the left eye was spuriously delayed at 132 ms. A half field pattern reversal VER showed that this delay was predominantly due to a dominant contralateral P135, with a reduced ipsilateral P100 (3 uv) occurring at 118 msec. This is a recognised entity in optic neuritis.[2,3] Auditory evoked potentials were normal. Two weeks post presentation her visual acuity had improved to 6/6 right and 6/12 left but with no improvement in colour discrimination. There was resolution of the disc swelling but persistence of the area of retinal whitening. A fluorescein angiogram showed a now perfused retinal arteriole corresponding to the area of retinal whitening (Fig. 2). There was no autofluorescence of the optic disc.

Six weeks post presentation the retinal whitening had completely cleared. Visual acuity was 6/6 right and 6/12 left and there was some improvement in colour discrimination. A relative afferent pupillary defect was still present however, along with pallor of the optic disc (Fig. 3).

Comment

The occurrence of a uveitis and or vasculitis in patients with optic neuritis is well recognised, but as far as we are aware there are no reports of an occlusion of a retinal arteriole in childhood optic neuritis. Retinal artery occlusion is uncommon below the age of 30 years. The cause is often multifactorial and multiple organ systems may be involved.[4] Pre-retinal arterial loops have been associated with retinal artery occlusion in young people[5] and although not a cause by itself, raised intraocular pressure has been found to be a predisposing factor in retinal artery occlusion.[4] The rise in intraocular pressure in this case was presumed to be part of a glaucomatocyclitic crisis and together with the small arteriolar loop may have contributed to the occlusion of the vessel.

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Sir,

Herpes Virus in a Corneal Donor

Although donor to host transmission of infection by corneal transplantation is rare,[1] the number of potentially transmissible agents is large. The Creutzfeldt-Jakob agent, and Hepatitis B and rabies viruses, have all been reported to be transmitted by this surgical procedure.[2] All donors are now screened for antibodies to Hepatitis B and HIV as both viruses have been demonstrated in the cornea and tear film.[3,4] Despite being a common