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Sir,

Possible cat scratch disease causing neuroretinitis and CRVO in a child

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Bartonella are gram-negative rods.¹ Of the 14 known species, five are associated with human disease. *B. henselae* causes cat scratch disease and *B. quintana* causes trench fever. *B. henselae* infections often present with fever, malaise and lymphadenopathy. A history of contact with a cat is not always present. Eye involvement can cause Parinaud oculoglandular fever, neuroretinitis^{2,3} and an inflammatory mass of the optic nerve head.⁴

Case report

A 9-year-old male presented with a history of poor vision for 2 days, with no other specific medical or ocular history of note. There was no pain, lymphadenopathy, fever or trauma. Physical examination revealed a healthy male with normal blood pressure, urinalysis, without hepatosplenomegaly, lymphadenopathy or anaemia.

Ophthalmological examination revealed a visual acuity of 6/5 in the right eye and 3/60 in the left with a dense relative afferent pupillary defect. There was no anterior segment or vitreous inflammation. The left retina had widespread hemorrhages with tortuous vessels with an area of possible focal retinitis involving the papillo-macular bundle, and a early macular star (Figure 1). The right fundus was normal.

Investigations, including: FBC, U & E, clotting and thrombophilia screen, LFT, autoantibody screen, serum cholesterol, HDL and triglycerides, ESR, serum homocysteine, MRI scan, echocardiogram and ocular ultrasound, were normal. Fundus fluorescein angiogram was not possible. Indirect immunofluorescence titres for anti-*B. henselae*, taken 3 weeks after initial presentation, were one in 64. There was a cross-reactivity with *B. quintana* which was reported as one in 128 IgG (IgM negative).

A tentative diagnosis was made of neuroretinitis secondary to *B. henselae* with a subsequent central retinal vein occlusion. A 2-week course of 250 mg Clarythromycin b.d. was given. Further questioning elicited a history of contact with a stray kitten while on holiday in Italy 5 weeks prior to presentation. The titers were taken 8 weeks after this exposure. Subsequent titers were unchanged. Three months later, the vision had improved to 6/6. The retinal appearances had returned to normal with the exception of mild increased tortousity.

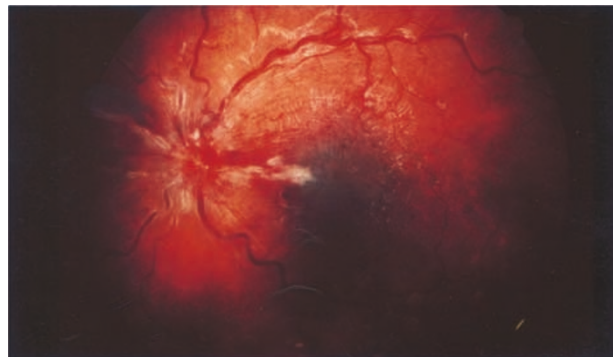


Figure 1 Left ocular fundus.

Comment

Central retinal vein occlusion is extremely rare in children. In a review of 17 patients with CRVO under the age of 40,⁵ only one was in the paediatric age group. We speculate that there was an initial optic disc swelling in association with neuroretinitis which precipitated a CRVO. Solley *et al*⁶ reviewed 24 patients with cat scratch disease, of whom 13 had unilateral disease and three were under 16 years of age. They reported one case of branch retinal vein occlusion. Epidemiological data suggest that higher cat infection rates are associated with a warm climate, fleas and kittens. Most authors advocate treatment of *B. henselae* with antibiotics, and Rifampicin and Doxycycline are often used. Because of the age of this patient we used Clamthromycin. There is some debate as to whether antibiotics alter long-term outcome in *B. henselae* associated neuroretinitis which is good in most cases.³

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Sir,

Spontaneous orbital haemorrhage in purpura fulminans secondary to meningococcal septicaemia
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Spontaneous orbital haemorrhage is a very rare event.^{1–3} Law in 1971 defined this condition to be the occurrence of haemorrhage within the orbit not caused by local trauma and not referable, as far as can be ascertained, to any constitutional causative condition.

Meningococcal infection is associated with the development of an imbalance of haemostatic pathways.^{4,5} A general shift towards activation of the pro-coagulant pathways leads to disseminated intravascular coagulopathy (DIC).

DIC is followed by a secondary bleeding diathesis, as pro-coagulant factors are rapidly consumed.^{4–6} This bleeding tendency is thought to be responsible for the characteristic purpuric rash in meningococcaemia.⁵

In this clinical scenario, thrombosis and haemorrhage are known to occur in several organs and tissues,^{5,6} but haemorrhage into the orbit from this cause has not been described before. We present a case of spontaneous orbital haemorrhage in a patient with purpura fulminans secondary to meningococcal septicaemia.

Case report

A 14-year-old female presented to the paediatric unit with a 12-h history of fever, irritability and diarrhoea. A few hours later this was followed by swelling around the left eye. The patient was previously fit and well with no significant past medical history. She had previous vaccination for group C meningococcal disease. On the morning of admission the patient developed widespread petechial and purpuric haemorrhages. Based on the clinical findings, a diagnosis of meningococcal septicaemia was made and intravenous benzyl penicillin started. The patient was then transferred to the ITU.

Four hours after admission the patient developed a productive cough, respiratory distress and peripheral cyanosis. Clinical examination confirmed the presence of pulmonary oedema. Endotracheal intubation and mechanical ventilation was instituted along with inotropic support using dobutamine and adrenaline infusions.

When the patient was stabilised, it was then noted that the swelling around the left eye appeared to have increased along with increased haemorrhages around the globe. An ophthalmic opinion was then sought.