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Sir,

Sphenoidal mucopyelocele presenting as optic neuropathy

Sinus infection and adjacent spread to orbital and allied structures may lead to blindness.[1–3] Isolated sphenoid sinus mucocele is a rare entity, only a few cases being reported in the ophthalmic literature. We report a case of sphenoidal mucopyelocele encroaching intraorbitally and unilaterally compressing an optic nerve resulting in optic neuropathy and unilateral blindness.

Case report

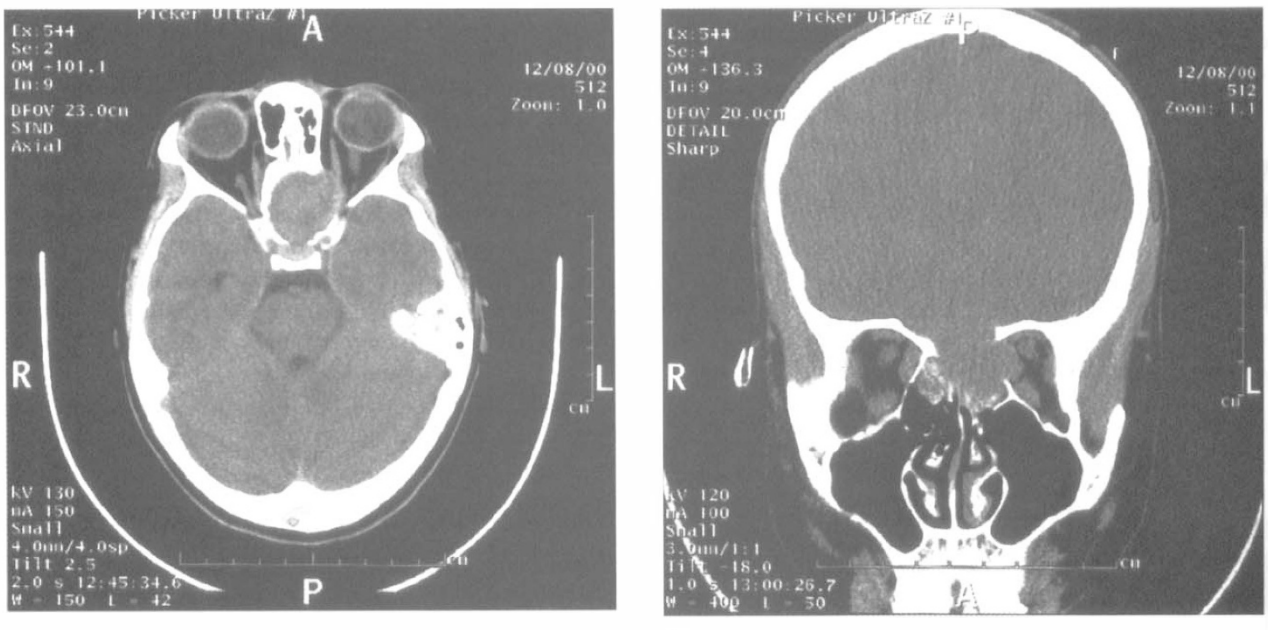
A 13-year-old girl was referred to the eye casualty by her GP complaining of poor vision in the left eye over 2 weeks with sudden worsening over 1 day. She complained of associated frontal headache, which had been present for 2 weeks. She had no other neurological complaints. On examination her visual acuity was 6/6 in the right eye and no perception of light in the left eye. She had an afferent pupillary defect on the left side. Fundus examination revealed a moderately oedematous disc in the affected eye. There was no other ocular abnormality in that eye. The right eye examination was normal. The presumptive diagnosis was of a demyelinating disease. MRI scan of the brain and orbit was arranged for the following day. Overnight her mother reported that she had a temperature of 37.2 °C and had vomited.

The MRI scan was of poor quality due to the presence of fixed braces on her teeth, but no abnormality was reported. Her full blood count, ESR and C-reactive protein were all normal. She was admitted to the paediatric unit for further investigations. A lumbar puncture was performed. Electrophoresis of cerebrospinal fluid did not detect any oligoclonal bands, but the alpha-2 region was raised which can suggest acute phase protein increase caused by infection. Further assessment of the MRI scans raised concerns about the possibility of a mass around the sphenoid region. A subsequent CT scan revealed a soft tissue mass arising from the posterior ethmoidal area and involving the sphenoidal sinuses. It was extending below to the superior antral margin. There was bony destruction, particularly of the medial left posterior orbital wall (Fig. 1a). The mass was displacing the left optic nerve (Fig. 1b). It was thought to be an invasive adenocarcinoma and a biopsy was planned.

Endonasal transsphenoidal biopsy resulted in the drainage of about 30 ml of pus from a large sphenoidal mucocele. Pus aspirated from the abscess and the blood culture grew *Staphylococcus aureus*. The patient was treated with intravenous ceftrioxone, oral metronidazole and dexamethasone. Her headache and fever resolved. The visual acuity in her left eye has not improved beyond inaccurate light projection, 1 month after initial presentation.

Comment

Sphenoidal sinusitis and abscess formation is rare.[3,4] Close proximity to the vital structures and slender bony structure often leads to serious complications.[1,2,5] Optic



(a) (b)

Fig. 1. *CT scans showing (a) bony destruction, particularly of the medial left posterior orbital wall, and (b) displacement of the optic nerve by the mass.*

neuritis, abducens and oculomotor nerve involvement have been noted with sphenoidal mucoceles.[2,3,6] A sphenoidal mucocele extending intracranially can be misdiagnosed as a malignancy.[1] Rarity of presentation, along with absence of positive indicators of infection (normal full blood count, ESR and C-reactive protein) and an inconclusive MRI appearance, led to a diagnostic dilemma in this case. In children with unilateral or bilateral optic neuropathy sinus infection should be suspected. CT scanning is the diagnostic imaging of choice in these patients.[7] The appropriate method of treating a sphenoidal mucopyelocele is transsphenoidal decompression and antibiotic therapy.[8]

The visual recovery depends on the acuity at the time of diagnosis.[4] Our case presented with no perception of light and did not improve beyond inaccurate projection despite surgical decompression of the mucopyelocele and antibiotic therapy. Therefore in children with optic neuropathy, ophthalmologists should be alert to the possibility of sphenoid sinus disease as an aetiological factor.

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Sir,

Visual loss as the presenting feature of acute myeloid leukaemia

Isolated visual loss secondary to retinal pathology is a common referral to the ophthalmologist in the casualty setting. We present a patient who was found to have acute myeloid leukaemia, after an initial presentation of isolated decreased visual acuity in one eye. There have been very few reports in the literature of acute leukaemia presenting in this way, and it is important to be aware that this life-threatening blood disorder may initially present to the ophthalmologist.

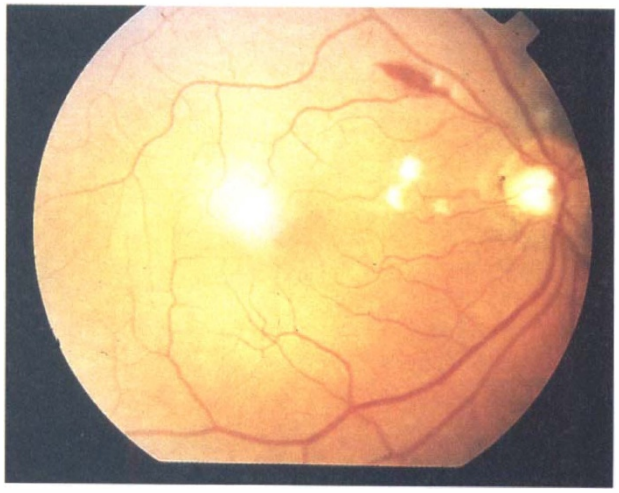

Fig. 1. *Fundus photograph of the right eye showing retinal haemorrhages and cotton wool spots near the optic disc.*

Case report

A 76-year-old Caucasian man presented to his optician with a 2 day history of blurred vision in the left eye. His visual acuity was recorded as 6/5 in the right eye and 6/24 in the left. Retinal haemorrhages at the left macula were observed and the patient was referred directly to the eye casualty.

On further enquiry, the patient stated that he had always enjoyed good health and normal vision. His past medical history was unremarkable except for one hospital admission for epistaxis and an operation for Dupuytren's contracture 15 years previously.

Ocular examination revealed marked tarsal conjunctival pallor, but otherwise healthy anterior segments. Fundoscopy demonstrated cotton wool spots and flame-shaped haemorrhages at both posterior poles (Fig. 1), with retinal and preretinal haemorrhage extending over the fovea in the left eye (Fig. 2). In both fundi, the arterial and venous calibre appeared normal, with no features indicative of hypertension.

Further investigation revealed a normal blood pressure (110/70 mmHg) and blood glucose (5.8 mmol/l). Serum electrolytes and liver function tests were within normal parameters. An urgent full blood count revealed a normocytic anaemia (Hb 6.0 g/dl), leucocytosis (WCC 38.6 $\times 10^9$/l) and a profound thrombocytopenia (Plts 8 $\times 10^9$/l). The blood film showed numerous blasts (36.3 $\times 10^9$/l), with a variable nuclear:cytoplasmic ratio, some with cleft or budding nuclei, and single nucleolus. The bone marrow was hypercellular and replaced by blast cells. Cytogenetic analysis revealed monosomy 7 and additional material