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Sir,

Dramatic visual recovery after prompt radiotherapy and chemotherapy for leukaemic infiltration of the optic nerve in a child

Optic nerve infiltration may occur in central nervous system (CNS) relapse of acute lymphoblastic leukaemia (ALL). We report a patient in whom prompt radiotherapy and intrathecal chemotherapy resulted in remarkable visual recovery and ALL remission.

Case report

A 14-year-old boy was referred with a 2-day history of painless reduced vision in his left eye. He had a previous diagnosis of ALL with multiple relapses over 10 years and had previously received 1800 cGy prophylactic cranial radiotherapy. He was currently in remission with monthly maintenance intrathecal chemotherapy. Visual acuity was 6/9 in his right eye and 6/36 in his left. Fundal examination revealed asymmetric bilateral optic nerve infiltration (see Figures 1a and b) also seen on magnetic resonance imaging (MRI) (see Figure 2). Immediate emergency radiation therapy was initiated, consisting of 1200 cGy fractionated over 6 days encompassing orbits and brain, with an additional 800 cGy boost to his posterior retina and optic nerves in five fractions. He also received weekly intrathecal methotrexate, cytarabine, and hydrocortisone. He subsequently returned into remission with a visual improvement to 6/6 in his right eye and 6/9 in his left eye at 6 months of follow-up, back on monthly maintenance chemotherapy. The disc swelling had fully resolved by that point.

Comment

Ocular involvement in a child known to have leukaemia has been associated with significantly poorer visual and mortality outcomes.[1] The CNS and the eye are sanctuary sites at the time of initial chemotherapy for ALL and thus common sites of recurrence. Optic nerve infiltration represents a CNS relapse and leads to blindness, and as such should be treated as an ophthalmic emergency. It is also important to distinguish it using MRI from papilloedema secondary to brain relapse.

Previous case reports have shown that vision can be salvaged in optic nerve infiltration by prompt appropriate treatment in the form of radiotherapy to the orbits and CNS,[2,3] accompanied with aggressive intrathecal and systemic chemotherapy.[4] Chemotherapy alone has been reported as being unsuccessful in improving either survival or visual outcomes.[5] Radiotherapy to the CNS was given to our patient, as optic nerve infiltration represents a CNS relapse. Though his long-term prognosis remains uncertain, he does

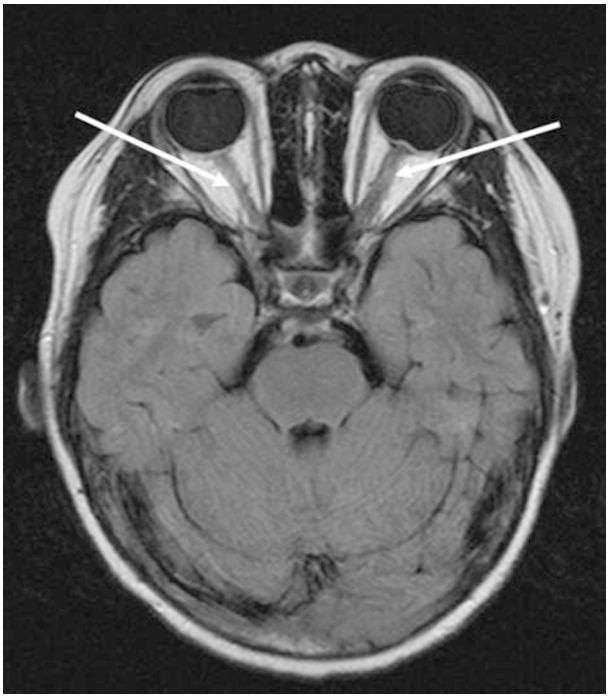

Figure 2 T2-weighted FLAIR sequence MRI scan of the CNS and orbits showing diffuse bilateral optic nerve infiltration worse on the left (arrows).

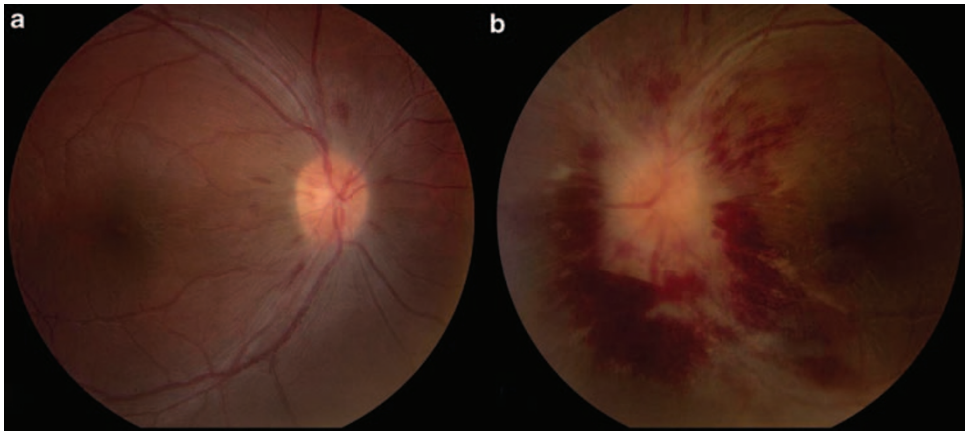

Figure 1 (a) Fundal photograph of the right eye showing mild disc swelling and peripapillary haemorrhages, representing optic nerve infiltration. (b) Fundal photograph of the left eye showing dramatic creamy-white optic nerve infiltration and peripapillary haemorrhages.

highlight the importance of prompt diagnosis, referral, and subsequent intervention in children with suspected CNS relapse of their leukaemia.

Conflict of interest
The authors declare no conflict of interest.

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Sir,
Iritis, ptosis, and sequential severe loss of vision in a patient with essential thrombocytosis

We describe a patient with signs of partial third nerve palsy, severe iritis, and loss of vision due to essential thrombocytosis.

Case report
A 60-year-old man was referred from the neurologists by whom he had previously been treated under suspicion of TIAs.

Initially, visual acuity was 6/6 in both eyes. At presentation, a ptosis on the left eye was observed, but otherwise the eye examination was unremarkable. After a couple of months, he developed several episodes of aggressive iritis, with various forms of keratic precipitates. He had posterior synechiae and markedly increased intraocular pressure (IOP). He had no corneal oedema, pain, or photophobia. Uveitis investigation and MRI of the orbits were normal.

At that time, repeated blood tests showed an elevated platelet count ($\sim 80 \times 10/l$). A bone marrow biopsy was performed and essential thrombocytosis was diagnosed.

He was continuously treated with hydroxyurea as well as venesection and the iritis is more readily controlled—but vision has slowly deteriorated. Two years after diagnosis, vision is now restricted to counting fingers with a pale optic disc on fundoscopy. No retinal changes have been observed, and no neovascularisations have been seen on the iris. The ptosis is unresolved and eye movements are normal.

Essential thrombocytosis causes multiple vascular occlusive disease and some groups have reported vascular retinal occlusions in essential thrombocytosis.[1,2] To our knowledge, iritis has never been reported in essential thrombocytosis, and only one previous report has described a partial third nerve palsy in essential thrombocytosis.[3]

Comment
As essential thrombocytosis is not a leukaemic or carcinoid disease, it is unlikely that iritis is due to an autoimmune reaction, but more so due to an ischaemic reaction. Cells in the anterior chamber have been described in ocular ischaemic syndrome.[4] The patient also suffered from an unspecific constant burning periocular pain—possibly of ischaemic origin.

It is concluded that the patient, because of essential thrombocytosis, suffered from multiple minor ischaemic events in the central nervous system, including a partial third nerve palsy and severe ocular ischaemia, which has caused iritis and slow progressive optic neuropathy.

Conflict of interest
The authors declare no conflict of interest.

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Sir,
Alcohol cleansing prolongs the infectivity of prions on instruments

Lockington *et al*[1] rightly raise the issue of microbial contamination of disposable tonometer prism holders,