Conflict of interest
The authors declare no conflict of interest.

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Sir,
Bilateral retinoschisis in a 2-year-old following a three-storey fall

Intraocular haemorrhages, traumatic retinoschisis, and retinal folds are of prime diagnostic importance in children because of their correlation with abusive head trauma (AHT). We report a case of a previously well 2-year-old with bilateral macular retinoschisis as a result of head trauma sustained in a fall of 11 m onto concrete.

Case report
A 24-month-old girl was transferred to our facility following an unwitnessed fall of 11 m onto concrete, from a window in the family's third floor apartment. Her initial Glasgow Coma Score was 4; she had decorticate posturing and a fixed, dilated right pupil. She was intubated, sedated, paralysed, and given intravenous mannitol.

Computed tomography of the brain (Figure 1) showed multiple skull fractures, acute right subdural haematoma (SDH), and cerebral oedema. She underwent decompressive craniotomy and evacuation of SDH. Intraoperatively, there was also evidence of subarachnoid haemorrhage. Postoperatively, her intracranial pressure fluctuated between 20 and 52 mm Hg. Coagulation studies remained normal.

Dilated indirect ophthalmoscopy by a paediatric ophthalmologist on day 9 revealed bilateral preretinal, intraretinal, and subretinal haemorrhages and bilateral macular retinoschisis (Figures 2 and 3). The schisis cavity in the right eye showed a possible elevated retinal fold at the inferior edge (Figure 2).

Despite maximal therapy there was no improvement, and treatment was withdrawn on day 11. No post-mortem examination was conducted after consultation with the State Coroner. Police investigation concluded that the injury was an accident.

Comment
Previous studies[1,2] have found IOH to be rare, mild, and generally unilateral in accidental head injury. Until recently, retinoschisis and retinal folds were considered specific for AHT. They have only otherwise been reported in static crush head injuries.[3–5] In an autopsy series of motor vehicle crashes,[6] three of the ten cases had unilateral retinal folds and five patients had sub-internal limiting membrane haemorrhages, although these were not referred to as traumatic retinoschisis.

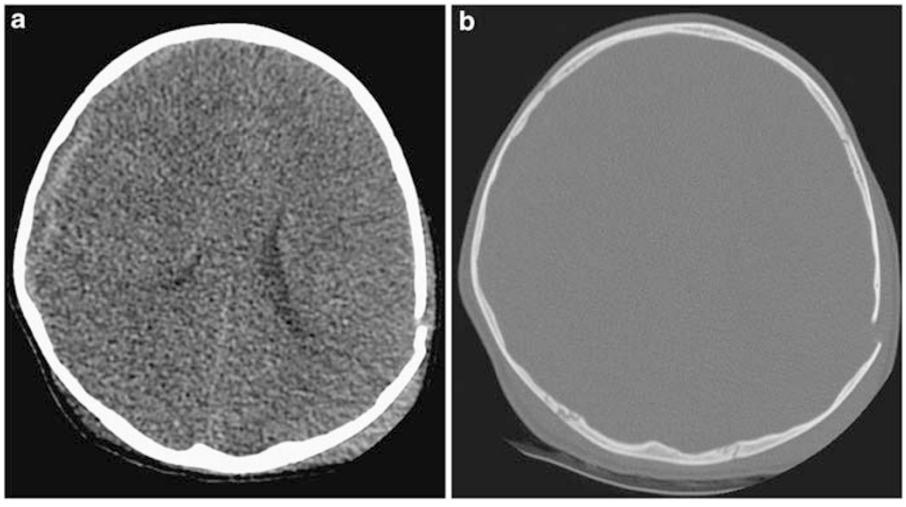

Figure 1 Computed tomography scan performed on day 1 of admission at the local hospital. (a) There is evidence of acute right SDH measuring 7 mm in width, midline shift, dilatation of the left lateral ventricle, and widespread cerebral oedema. (b) Bone windows showing the large left parietal fracture.

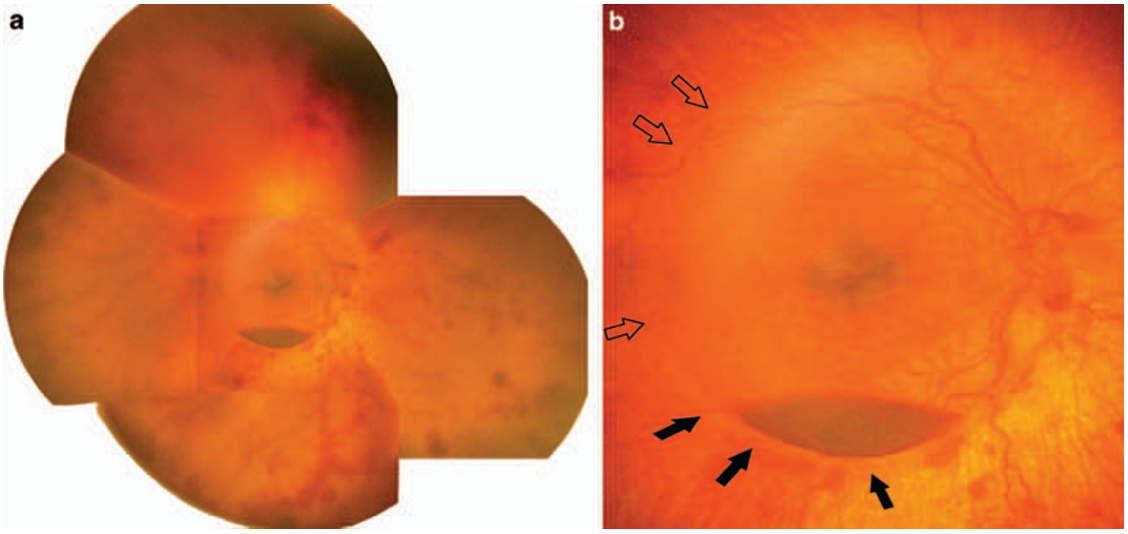

Figure 2 RetCam image of the right eye. (a) Right eye—haemorrhagic retinopathy showing subhyaloid haemorrhage as well as flame and dot haemorrhages and optic nerve head swelling. (b) Right eye—traumatic retinoschisis. Identified is the circumlinear hypopigmented retinal fold at the edge of the cavity over which the blood vessels bend (closed arrows). The open arrows indicate the edge of the schisis cavity.

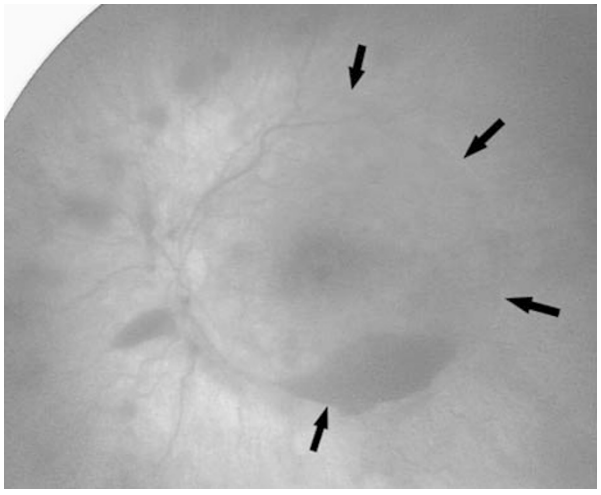

Figure 3 RetCam image of the left eye—haemorrhagic retinopathy and traumatic retinoschisis, similar in appearance to the right side.

To our knowledge, our patient is the first reported case of a child sustaining traumatic retinoschisis from an accidental fall. This raises the notion that retinoschisis may not be entirely specific to one type of trauma. Before attributing IOH, retinoschisis, or retinal folds to a fall or a crush injury, as opposed to inflicted trauma, however, a thorough multidisciplinary investigation must be undertaken. Early ophthalmic consultation is a critical part of the evaluation in these circumstances.

Conflict of interest
The authors declare no conflict of interest.

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