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CSH Tan and EY Yap

The Eye Institute, National Healthcare Group
Tan Tock Seng Hospital, 11 Jalan Tan Tock Seng
Singapore 308433, Singapore

Correspondence: Colin SH Tan
Tel: +65 63577726
Fax: +65 63577718
E-mail: Colintan_eye@yahoo.com.sg

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Sir,
Permanent visual loss following traumatic cortical contusion

Cortical blindness as a result of head trauma is a rare phenomenon characterized by transient visual loss, normal pupillary response and normal fundal examination.¹ We report a case of permanent cortical visual loss following a closed head injury sustained in road traffic accident.

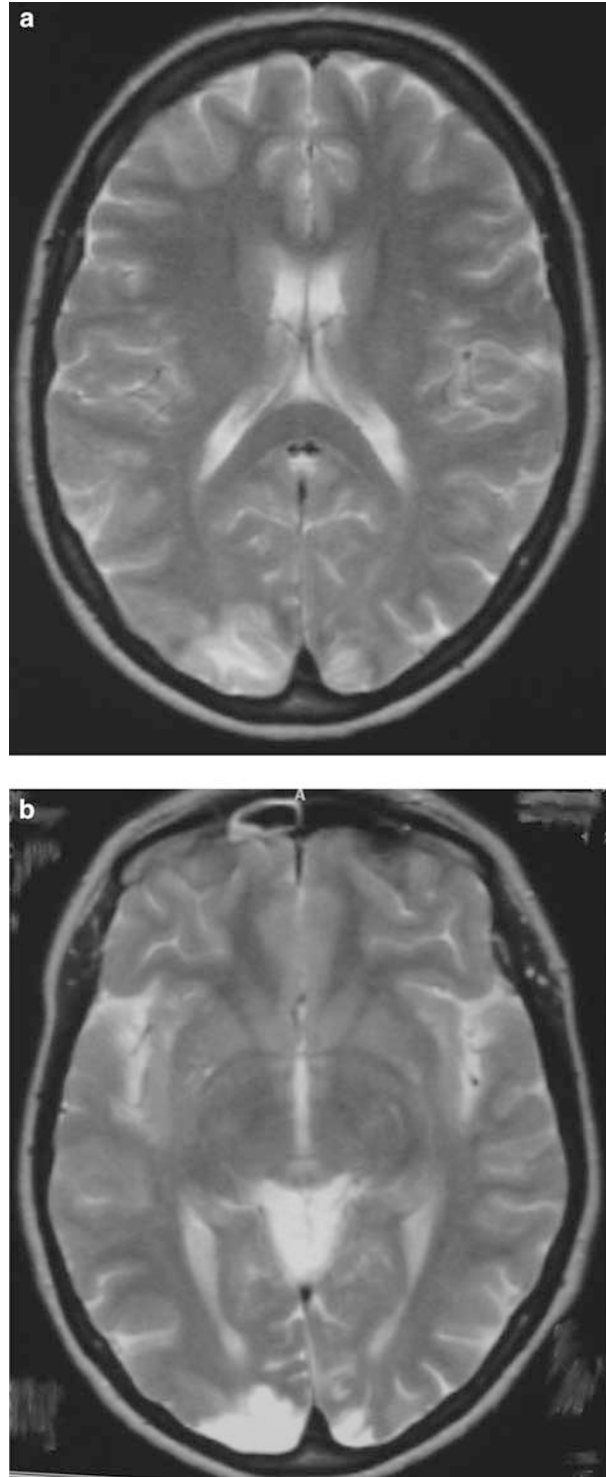


Figure 1 T2-weighted MRI of the brain. (a) At 1 week after the accident, MRI shows bilateral occipital cortical high signal intensity lesions more marked on the right side, consistent with nonhaemorrhagic contusions. (b) At 1 year after the accident, MRI shows focal bilateral occipital cortical loss, more on the right side, consistent with gliosis or focal atrophy secondary to previous contusion.

Case report

A 50-year-old female was referred to Eye Casualty at Cork University Hospital because of bilateral loss of central vision following a road traffic accident. On admission to hospital the day after injury, the patient's corrected visual acuity was 6/60 in each eye with normal pupillary reaction, clear media, and normal fundi. With the same correction, visual acuity prior to the head injury, had been recorded 6/9 in the right eye and 6/6 in the left eye, 12 months earlier. Visual fields to confrontation suggested bilateral central scotoma that was confirmed on the Humphrey visual field analyser. Brain MRI and CT scans revealed bilateral occipital lobe contusions, more pronounced on the right side (Figure 1).

After 2 weeks, the pattern of central scotoma changed to a left homonymous paracentral scotoma. At 3 months, her corrected visual acuity had improved to 6/24 in the right eye and 6/18 in the left eye. Further recovery, however, has not occurred in the 20 months since the accident. At present, her visual fields appear normal to confrontation, but the Humphrey visual field analyser shows a small area of reduced sensitivity indicating a relative central scotoma, denser in the left hemifield (Figure 2).

Comments

To date, few cases of prolonged post-traumatic cortical blindness have been reported.²⁻⁷

Typically, cortical blindness is a transient phenomenon, which follows minor head trauma and is thought to be the result of a migraine-type vascular spasm.⁸ The majority of reported cases are in children, with vision returning to normal within a few hours.^{9,10} Cerebral contusions are associated with capillary bleeding and usually occur on the gyral surface of the brain. Contusions are rare, however, in the cerebellum and occipital lobes.¹¹

To the best of our knowledge, this is the first reported case of an isolated occipital lobe contusion resulting in bilateral loss of vision.

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H Ameri¹, A Murray¹, PE Cleary¹ and LD Spence²

¹Department of Ophthalmology
Cork University Hospital
Cork, Ireland

²Department of Radiology
Cork University Hospital
Cork, Ireland

Correspondence: H Ameri
Tel: +353 86 3841918
Fax: +353 21 4922656
E-mail: amerih@eircom.net

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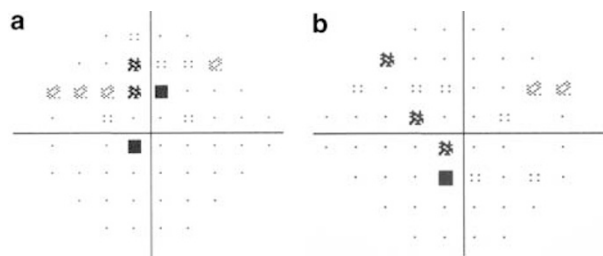


Figure 2 Pattern deviation diagrams on central 24-2 threshold test with Humphrey visual field analyser, 20 months after the accident. (a) left eye; (b) right eye.