HOMONYMOUS HEMIANOPIA WITH CHRONIC SUBDURAL HAEMATOMA (A Case Report)

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Introduction

Closed head injury can result in all types of visual field defects. Such defects are usually accompanied by other ocular signs like pupillary dilatation, abducens palsy and papilloedema [1,2]. Homonymous hemianopia as an isolated finding in chronic subdural haematoma (SDH) is rare.

CASE REPORT

A 32-year-old serving soldier sustained closed head injury in April 92. There was transient loss of consciousness followed by complete recovery except for mild impairment of cognitive functions. Cranial computed tomography (CT) revealed diffuse cerebral oedema for which he was given cerebral decongestants for a few days. Thereafter he was sent on sick leave. On review after sick leave in July 92, he showed further impairment of cognitive functions and complained of hallucinations. He also complained of impaired vision. Perimetry revealed homonymous hemianopia involving the left half of the visual field. The visual field was congruous and had 'sloping' margins (Fig 1). There was no afferent pupillary defect and optic discs were normal. CT revealed right frontal and superior temporal chronic SDH (Fig 2). The SDH was evacuated by a burr hole. He had improvement in his cognitive functions. Homonymous hemianopia has persisted after more than eighteen months of injury. MRI of the brain done later revealed normal optic tracts and there was no evidence of occipital infarction.

Discussion

Homonymous hemianopia following closed head injury may result from :

- infarction from injury to anterior, middle or posterior cerebral arteries,
- temporoparietal contusion or occipital contusion,

- intracerebral haematoma in temporoparietal or occipital regions,
- compression of optic radiation by subdural haematoma or
- parasellar haematoma pressing the optic tract [3].

Fig. 1 : Perimetry showing homonymous hemianopia.

Fig. 2 : CT scan showing chronic sub-dural haematoma over right frontal and upper temporal regions.

Homonymous hemianopia following head injury usually follows compression to the posterior cerebral artery in the tentorial hiatus due to transtentorial herniation, leading to occipital infarction. Chronic SDH causing tentorial herniation and occipital infarction is rare [4]. Equally rare is a chronic SDH producing only homonymous hemianopia by pressing on the optic radiation in the upper temporal region.

This patient had congruous homonymous hemianopia with 'sloping' margin, without accompanying afferent pupillary defect. In addition he had other features of temporal lobe involvement in the form of hallucinations and cognitive deficit. These features suggest that the compression of the geniculocalcarine tract occurred in the upper temporal region. MRI done later did not reveal any other cause, for homonymous hemianopia, like occipital infarction or optic tract lesion.

Lesions of the geniculocalcarine tract can result in a variety of homonymous field defects, depending upon the location and size of the lesion. An upper temporal lobe lesion can cause a complete homonymous

hemianopia which is quite indistinguishable from that observed in an occipital lesion [5]. In the temporal lobe, the common causes of visual field defect are abscess, tumour or injury. External compression by chronic SDH producing complete homonymous hemianopia is rare.

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