SUBARACHNOID HAEMORRHAGE AND NORMAL CT SCAN

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INTRODUCTION

Subarachnoid haemorrhage is an uncommon but important cause of loss of consciousness. In recent years, computerised tomography (CT) has become an increasingly useful investigation in the assessment of patients with suspected subarachnoid haemorrhage[1]. We would like to present a case which illustrates the limitations of its use in this context and suggest that clinical judgement should over-ride a normal CT scan.

CASE REPORT

A twenty-two year old male with no previous history of epilepsy was brought to the Accident and Emergency Department. The history from ambulance men was that he had fallen from the top of a stationary lorry. Soon after his arrival he started convulsing, this was controlled with intravenous diazemul. His skull x-ray and brain CT scan were normal. Subsequently, the patient regained consciousness and was admitted to the ward for observation. The following day he complained of severe headache. On examination, there were no focal neurological signs but he was noticed to have a stiff neck and the Kernig's sign was negative. A repeat CT scan (Figure)

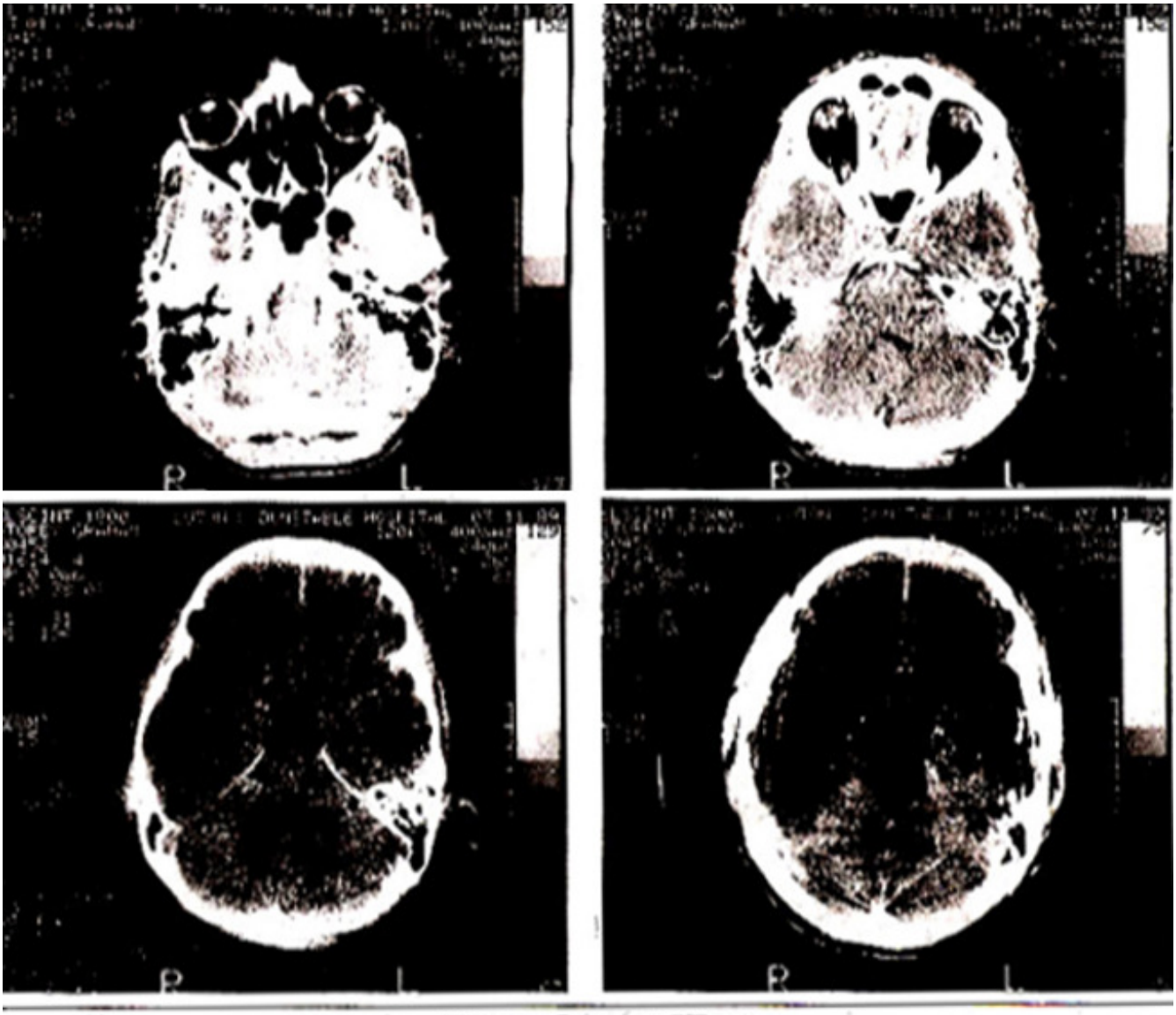

Figure. Repeat CT scan .

showed no abnormality and the conclusion was that the patient had post concussion headache. Later in the day the patient became increasingly confused and aggressive. In the meantime, a colleague of the patient who had come to visit him, gave a different account of the incident; according to him the patient got off the lorry and was standing on the ground when he collapsed. In view of the eye witness history of collapse and patient's complaint of headache and stiff neck, a lumbar puncture was performed. This was evenly blood stained with axanthochromic supernatant. The patient was then transferred to the local Neurological Unit and subsequent angiography revealed a posterior communicating artery aneurysm which was treated surgically.

DISCUSSION

Emergency physicians should always be alert to the possibility of medical antecedents to an accident and the importance of obtaining an eye witness account cannot be over-emphasised. The commonest cause of blood in the subarachnoid space is a spontaneous rupture of a saccular (berry) aneurysm[2]. Other causes included arterior-venous malformation, bleeding disorders, mycotic aneurysm, etc. Blood may also appear in the subarachnoid space following trauma. This may be a difficult condition to

distinguish from the above causes in an unconscious patient. In traumatic subarachnoid haemorrhage, there is usually a history of blow on the head, face or the upper cervical spine. The amount of bleeding is small and the condition usually settles on conservative management. Rarely a neurosurgical opinion may be required to establish the cause. Following subarachnoid haemorrhage, blood is detected in the CT scan in 95% of the patients if it is carried out within the first 24 hours[3,4]. Patients who have a normal CT scan following a subarachnoid haemorrhage are mostly in Hunt and Hess grade I and II[5]. These patients tend to have a good outcome[6]. Careful history taking and obtaining an eye witness account should alert the medical officer to the possibility of a subarachnoid haemorrhage and if this is suspected on clinical grounds, a lumbar puncture should be considered despite a normal CT scan, to allow early diagnosis and transfer for neurosurgical assessment.

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