

An Unusual Kind Of Traumatic Intracranial Hemorrhage: Post Traumatic Bleed Into The Schizencephalic Cleft

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Abstract

Schizencephaly is an uncommon disorder of neuronal migration. Of the two types described the closed lip variety is less commoner and is usually difficult to diagnose on CT images. Here we present a case of bleed into the schizencephalic cleft, which not only is undescribed in literature previously, but made the diagnosis relatively simpler by making the condition that would have been subtle otherwise, obvious.

CASE REPORT

A 45 yr old lady sustained a road traffic accident and presented with head ache

Plain CT head was done to rule out head injury

Some weakness of the left lower limb since birth/childhood.

Associated limping

Seizures - 4 to 5 episodes per year – not on medication

No mental retardation

Uninvestigated thus far

Plain axial CT section of head were taken.

FINDINGS

Posterior fossa CSF space – large cisterna magna

Figure 1



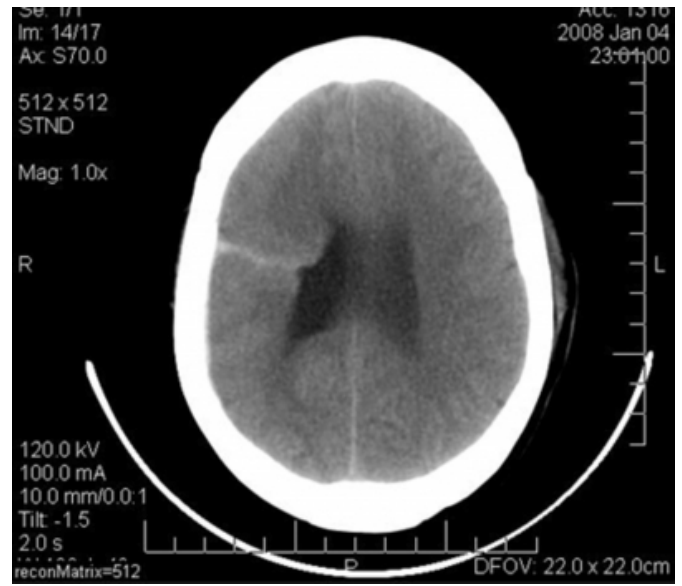
Thin right parietal subdural hemorrhage

Figure 2



Linear blood track extending through the right parietal parenchyma

Figure 4



On adjusted window settings the track was seen to be lined by grey matter.

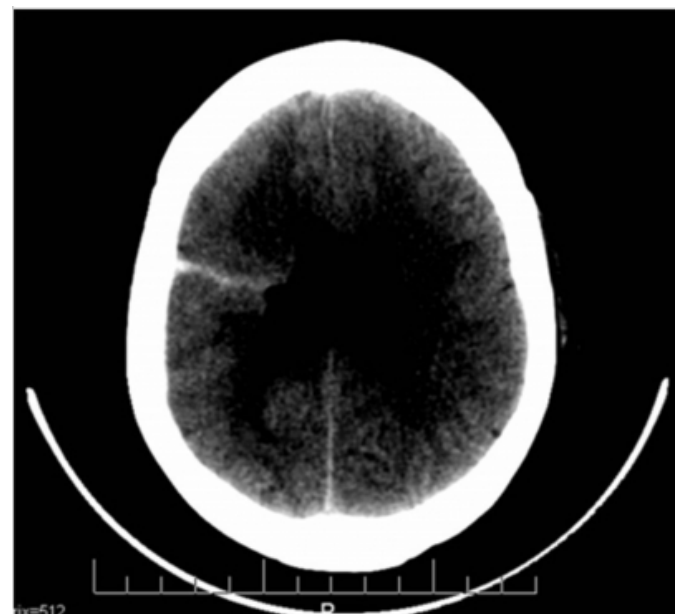
Figure 3



The linear track of blood was traversing the entire breadth of the right parietal parenchyma, extending from the subdural hemorrhage to the outer wall of the right lateral ventricle.

Small outpouching of the ventricular wall where the track of blood reached the ventricle.

Figure 5



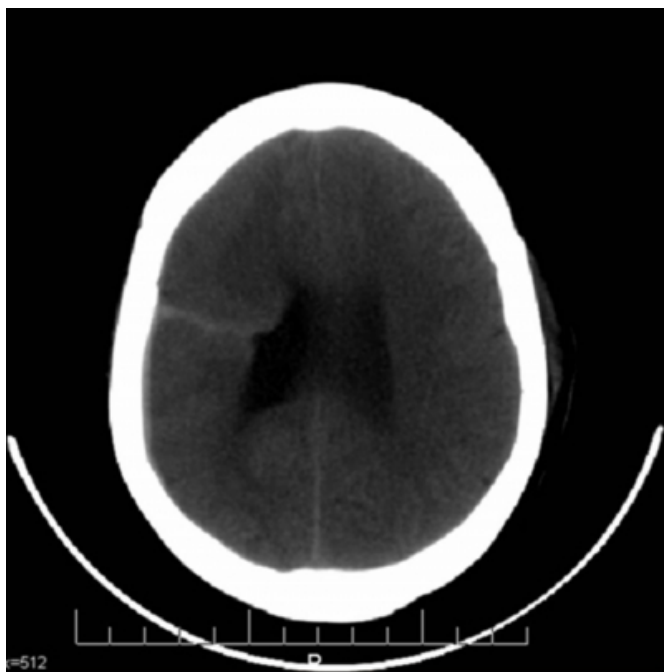
Intraventricular bleed in the occipital horn of the left lateral ventricle

Figure 6



Adjusted window settings showing the subdural hemorrhage and the track of blood better.

Figure 7



FINAL DIAGNOSIS

Closed lip schizencephaly with bleed into the schizencephalic cleft.

Subdural hemorrhage, Intraventricular hemorrhage, prominent cisterna magna

DISCUSSION

SCHIZENCEPHALY

Split brain

Disorder of neuronal migration

A grey matter lined CSF filled cleft extends from the ependymal surface through the white matter to the pia.

TYPES

TWO TYPES

Type1 Closed lip : cleft walls in apposition

Type2 Open lip : separated cleft walls

In both types cleft lined by heterotopic gray matter

Clefts can be unilateral or bilateral; symmetric or asymmetric.

IMAGING

CT of closed lip type show only a slight outpouching or nipple at ependymal surface of cleft.

Full thickness cleft or pial- ependymal seam, difficult to detect in CT, but easy in MR Open-lip type has larger gray matter lined CSF cleft and so the diagnosis is easy with either CT or MR

When very large the differential diagnosis to be entertained would be a porencephalic cyst; but then the porencephalic cyst is lined by white matter rather than by gray matter.

This case is unusual in that, the patient presented with a post traumatic bleed into the schizencephalic cleft which is not described in literature thus far. Also the bleed into the cleft aided the radiologist in such a way that the diagnosis stood out so obvious, and further investigations like MR were not required.

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