

Progressive headache in a 48-year-old man

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DESCRIPTION

A 48-year-old man with diabetes mellitus and alcoholic cirrhosis presented with a throbbing headache of 1-month duration. The patient did not have a history of intravenous drug use.

On physical examination, he was afebrile but disoriented with nuchal rigidity.

Head CT scan was negative. Lumbar puncture (LP), performed after the first dose of cefotaxime was given, showed a white cell count (WCC) of 84 620 cells/ μ L with 96% neutrophils. MRI of the brain revealed multiple ring-enhancing lesions consistent with brain abscess (figure 1).

Gram-positive cocci in pairs were seen in the cerebrospinal fluid (CSF), but blood and CSF cultures were negative. CT of the chest, abdomen and pelvis were negative for abscesses. A transthoracic echocardiogram was negative for vegetations.

The patient was started on cefotaxime and vancomycin with no improvement in his condition. A 20 mg dose of intrathecal vancomycin was given daily for 5 days. An LP performed on the 10th day showed WCC of 720. He completed an 8-week course of intravenous cefotaxime (2 g every 6 h) with complete resolution of symptoms.

DISCUSSION

Brain abscesses manifest with a triad of headache, fever and focal neurological deficit in 20% of

patients.¹ Blood and CSF cultures are positive in 68% of cases with streptococci and staphylococci isolated in 34% and 18% of samples, respectively.

Brain abscess can rupture into the subarachnoid space or the ventricular system leading to meningitis or ventriculitis with mortality rates of up to 85%.²

Intravenous antibiotics for at least 8 weeks are recommended to treat brain abscesses. Ventriculitis might slow clinical response and intrathecal/intraventricular administration of antibiotics could be of help.³

Learning points

- ▶ Ventriculitis complicating brain abscess rupture is a serious condition that carries high morbidity and mortality. Early diagnosis is crucial to avoid poor outcome.
- ▶ Ventriculitis can be visualised on MRI; ependymal wall thickening and a high-intensity signal on T2 will be evident. Furthermore, debris may be seen in the ventricle.
- ▶ In addition to intravenous antibiotics, intrathecal antibiotic administration should be considered in ventriculitis patients with slow clinical response.

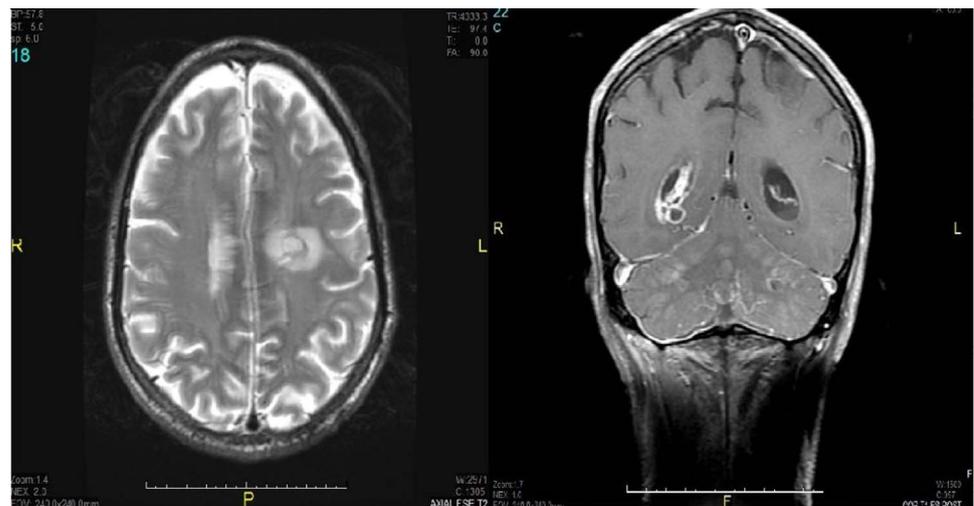


Figure 1 Left panel is an axial T2-weighted MRI of the brain showing a ring-enhancing lesion involving the left frontal–parietal lobe junction with oedema surrounding it. Right panel is a coronal T1-weighted fat-saturated postgadolinium MRI of the brain with signal enhancement of debris within the posterior horn of the left lateral ventricle, and also showing an abscess that has ruptured in that ventricle.



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