Case	(056) When to suspect viral encephalitis?
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CASE PRESENTATION

69-year-old woman found unconscious with generalized weakness and incoherent speech. No fever or analytical alterations. Normal chest x-ray and electrocardiogram. Brain CT without evidence of intra-or extra-axial bleeding with left temporal hypodensity. The patient is under observation. Within a few hours, he has a tendency to sleep, disorientation, fever of 39°C and seizure.

Brain CT scan performed 24 hours later shows marked progression of left temporal hypodensity, suggestive of viral encephalitis (figure B). Lumbar puncture was performed with red blood cells 250 mm3, Leukocytes 450/mm3 (mononuclear 100%, polymorphonuclear 0%), glucose 56.0 mg/dL, proteins 205 mg/dL, albumin 123.7 mg /dL, ADA 15.6 U/L and LDH 106 U/L . The patient is admitted to the ICU and treated with acyclovir, cefotaxime and ampicillin IV. Cerebral encephalitis is confirmed in brain MRI performed at 48 hours (Figures C and D). Three days after admission, Herpes simplex virus type 1 (HSV1) grows in cerebrospinal fluid. The diagnosis of acute herpetic encephalitis is confirmed.

DISCUSSION

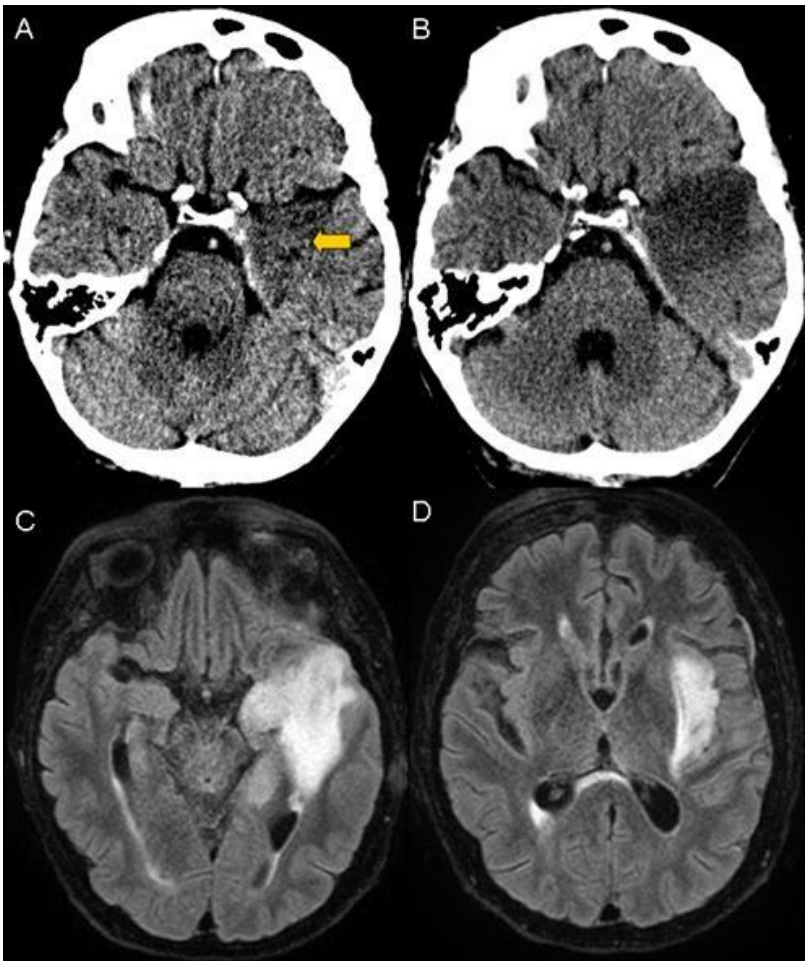
Viral encephalitis secondary to HSV1 is the most common known cause of encephalitis in the world, with a cumulative incidence in the United States of approximately 0.2 per 100 000 persons / year and a mortality in the absence of treatment of 70%. This percentage is reduced to 10-20% with the early establishment of adequate antiviral treatment.

Early diagnosis is difficult in craneal CT, and a the study may be normal. If findings are present, they typically consist of subtle low density within the anterior and medial parts of the temporal lobe and the insular cortex. A repeated study can show the changes more obvious and even progress to hemorrhage.

The study of choice is brain MRI that shows the involvement of temporal lobe. The differential diagnosis includes CNS infections due to Varicella Zoster virus, Epstein-Barr, herpes simplex type 6 or arbovirus, tuberculous or fungal meningitis, primary or secondary CNS tumors, adverse reaction to medications, autoimmune or paraneoplastic diseases, brain abscess or syphilis.

CONCLUSION

In patients with fluctuating consciousness and hyperproteinorrachia, the subtle hypodensities in temporal lobes in craneal CT should guide towards the diagnosis of viral encephalitis.



Images of the case. Figure A shows cerebral CT in middle cranial fossa without intravenous contrast, showing tenuous left temporal hypodensity (arrow). Figure B with cranial CT performed 24 hours later without iodinated contrast, with marked left temporal hypodensity that supports the suspicion of viral encephalitis. Figures C and D are axial T2-weighted FLAIR images of urgent cerebral MRI, showing extensive alteration of the signal, which affects the left temporal lobe and extends amygdala, hippocampus and ipsilateral insula, compatible with extensive encephalitis.

BIBLIOGRAPHY

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