

Clinical Image

What is behind a Strange Encephalitis?

Maria Mazzitelli^{1,2*}, Lolita Sasset¹, Serena Marinello¹, Marco Trevenzoli¹ and Annamaria Cattelan¹¹Department of Medical and Surgical Sciences, Magna Graecia² University of Catanzaro, Italy²Infectious and Tropical Diseases Unit, Padua Hospital, Italy***Correspondence to:** Maria Mazzitelli, Infectious and Tropical Diseases Unit, Padua Hospital Padua, Italy; Tel: 00393248991220; E-mail: m.mazzitelli88@gmail.com**Received:** May 25th, 2021; **Accepted:** June 3rd, 2021; **Published:** June 10th, 2021**Citation:** Mazzitelli M, Sasset L, Marinello S, Trevenzoli M, Cattelan A. What is behind a strange encephalitis? *Gastro Open A Open J.* 2021; 2(1): 45-46. doi: 10.33169/gastro.GOAJ-2-110**ABSTRACT**

Encephalitis are very serious clinical conditions and can be burdened by high mortality and morbidity. Their causes can be mainly infectious, but also neoplastic, autoimmune or toxic. The diagnostic algorithm must always consider all possible differential diagnoses.

Keywords: Intoxication; Encephalitis; Differential diagnosis.

CASE PRESENTATION

A 34-year-old man in good health with an unremarkable past medical history had access to the emergency department for acute onset of loss of consciousness, mydriatic pupils, mild rigor nuchalis and diarrhea. Cerebral Computerized Tomography (CT) was urgently performed and came back as negative for pathological findings. On suspicion of encephalitis, lumbar puncture was performed, and empiric antibiotic therapy was undertaken.

The Cerebrospinal Fluid (CSF) appeared to be clear, with a normal opening pressure, and without chemical alterations or microbiological growth. Also multiplex PCR for neurotropic agents (Filmarray[®]) came back as negative. While waiting for the CSF culture results, antibiotic therapy was maintained. Soon after admission, the patient developed psychomotor agitation with tonic clonus in the 4 limbs. The hypothesis of intoxication by drugs or toxic substances was therefore taken into consideration.

Therefore, urine toxicology screening and an abdominal CT were performed. Toxicology screening was positive for cannabinoids. At the CT scans, 13 to 15 sticks of hashish were found in the patient's stomach and duodenum (Figure 1, panel A and B). The patient was then rushed to the operating room. During surgery two sticks of drug were found as injured. The diarrhea was induced by the patient who self-administered enemas for evacuation purposes, without efficacy.

Encephalitis is an inflammation of the brain parenchyma often associated with neurological signs and/or symptoms.¹ It should be carefully distinguished from encephalopathy (not always associated

with inflammatory conditions) which has various causes and is characterized by altered state of consciousness, confusion and behavioral alterations.¹ Inflammatory causes include infections, post-infectious processes, or other conditions such as neoplastic or autoimmune ones. By contrast, the non-inflammatory causes include metabolic and toxic causes.²

Figure 1: Case report CT scan imaging (transverse plane, panel A, and coronal plane, panel B).



Early diagnosis and treatment are crucial in reducing encephalitis-associated morbidity and mortality. It is essentially based on the presence of acute onset neurological symptoms and signs (24h to 72 h) often accompanied by systemic manifestations, on CSF examination,

electroencephalogram and neuroradiological imaging. Most encephalitis recognizes a viral etiology and the frequency of individual agents varies in relation to the geographical area, seasonality, and immunological status of the patient. In the diagnostic algorithm, as differential diagnosis, it is important to remember the presence of other infectious and non-infectious causes including autoimmune and paraneoplastic forms; non-inflammatory encephalopathies should also always be considered, including those of metabolic origin or from toxic agents (drugs, drugs and poisons).

This case teaches us to consider in cases of suspected encephalitis, also alternative diagnoses such as neoplasms or intoxication from drugs/narcotic substances.

CONFLICTS OF INTEREST

None.

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