

CLINICAL IMAGE

Neurocysticercosis a public health problem

Elisa Carolina Jácome Sánchez, Edgar Patricio Correa Díaz , Braulio Martinez Burbano, María Angélica Ortiz Yépez & María Ariana García Castillo

Department of Neurology at Carlos Andrade Marin Hospital, Avenida Ayacucho y 18 de Septiembre, Quito, Ecuador

Correspondence

Edgar Patricio Correa Díaz, Department of Neurology at Carlos Andrade Marin Hospital, Avenida Ayacucho y 18 de Septiembre, Quito 170411, Ecuador. Tel: +593 99 679 4692; E-mail: patocorrea2010@yahoo.com

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Key Clinical Message

Neurocysticercosis is a parasitic disease of the central nervous system that constitutes a public health problem in endemic regions. Here, we present a patient with epilepsy and cognitive impairment due to neurocysticercosis. A public health intervention could eradicate this disease in endemic regions such as Ecuador.

Keywords

Cognitive impairment, epilepsy, neurocysticercosis.

Questions

- 1 What is observed in image 1?
- 2 How can this be prevented?

Response

Male patient, 50 years old, who at the age of 14 presented with generalized tonic–clonic and complex partial seizures due to neurocysticercosis (NCC). His epilepsy had been treated with various therapeutic regimens, none of which achieved adequate control of the seizures (refractory epilepsy). The neuropsychological evaluation performed through the NeuroPsy Test determined the presence of amnesic mild cognitive impairment. A computed tomography (CT) scan of the brain showed the presence of multiple calcifications (>30), distributed diffusely throughout the cerebral parenchyma. Study of magnetic resonance imaging (MRI) of the brain showed a moderate magnification of the choroidal fissure and temporal ventricular horns, in addition to a moderate loss of hippocampal height. This image corresponds to moderate temporal medial atrophy, according to the global scale of cortical atrophy (Fig. 1).

Neurocysticercosis is a parasitic infection of the central nervous system caused by ingestion of tapeworm eggs of *Taenia solium*. Seizure is the most common manifestation of cerebral parenchymal cysticercosis [1]. In addition, this disease is responsible for mild cognitive impairment or even dementia [2]. The presence of calcifications in CT of the brain is the most common radiographic finding [1]. An appropriate public health intervention could prevent, control, and possibly eradicate this infection. Measures that should be taken include the following: antiparasitic chemotherapy for infected individuals or mass chemotherapy, health education to the affected population, and treatment of infected pigs with antiparasitic drugs (albendazole or praziquantel) or immunization of infected pigs through vaccination [3]. This disease represents a major public health problem whose eradication is feasible and could reduce the prevalence of complications such as epilepsy and cognitive impairment [2].

Authorship

ECJS and EPCD: designed the research; MAGC: collected and analyzed all magnetic resonance imaging examination images; ECJS, EPCD, BMB, and MAOY: wrote the manuscript.

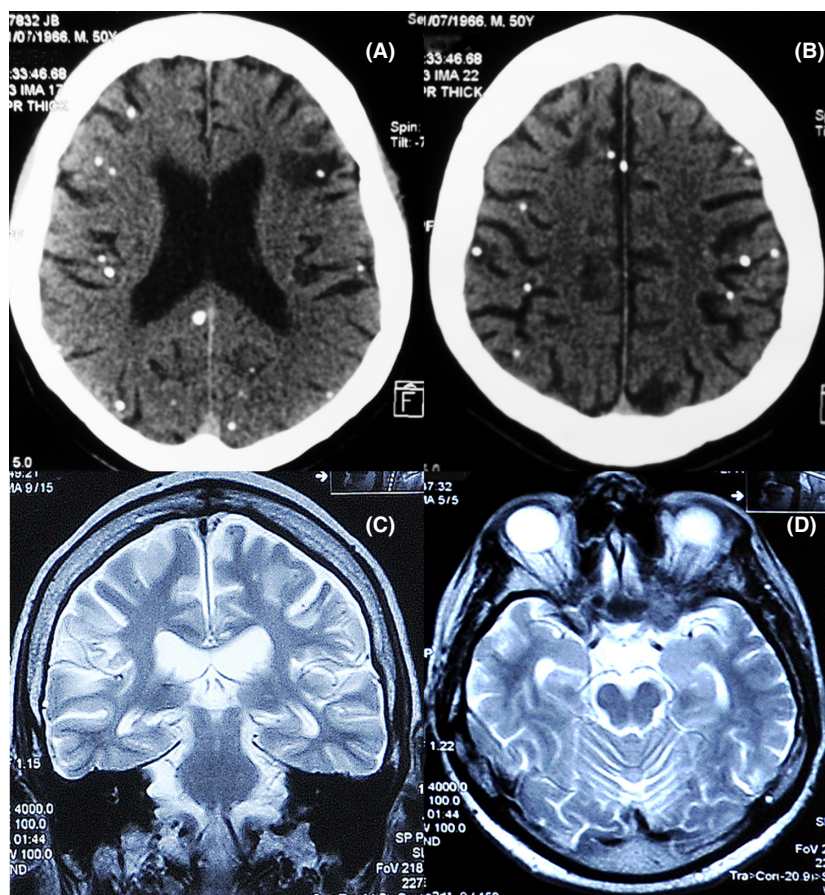


Figure 1. (A–D) CT shows multiple parenchymal brain calcifications (A, B). T2-weighted imaging at the level of uncus hippocampus detects atrophy with thinning of cortex and the white matter. The dilatation of the temporal horns of the lateral ventricles and the parahippocampal fissures is observed (C, D).

Conflict of Interest

None declared.

References

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