

Images in Infectious Diseases

Muscular and brain cysticercosis

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A previously healthy 45-year-old woman presented with seizures. Computed tomography and subsequent magnetic resonance imaging (MRI) revealed calcified brain lesions (**Figure 1**).

MRI revealed multiple cerebral ring-enhancing lesions with cystic components, a scolex, and vasogenic edema (**Figure 1**).

Fast imaging, employing a steady-state acquisition MRI sequence also revealed lesions in the fourth ventricle, indicating the racemose form of extra-parenchymal neurocysticercosis (NCC) (**Figure 2**). The racemose form, which requires prolonged treatment, is associated with increased morbidity and mortality and may lead to cerebrovascular complications^{1,2}. NCC was considered the cause for the epilepsy, being among the most common causes of structural epilepsy³.

Rice-like ovoid calcifications resembling a starry sky were identified in the muscles (**Figure 3**), suggestive of cysticercosis⁴. The muscular form of cysticercosis is generally asymptomatic. However, three distinct types of manifestations may be observed: the myalgic, myopathic type; the nodular or mass-like type; and the rare pseudohypertrophy type⁵.

If rice- or starry sky-like muscular calcifications are detected, cysticercosis must be suspected⁶. Even in patients without systemic or neurological manifestations, this finding is indicative of this diagnosis.

This case highlights the association of NCC with the muscular form of cysticercosis and its peculiar imaging findings in a patient with epilepsy beginning in adult life.

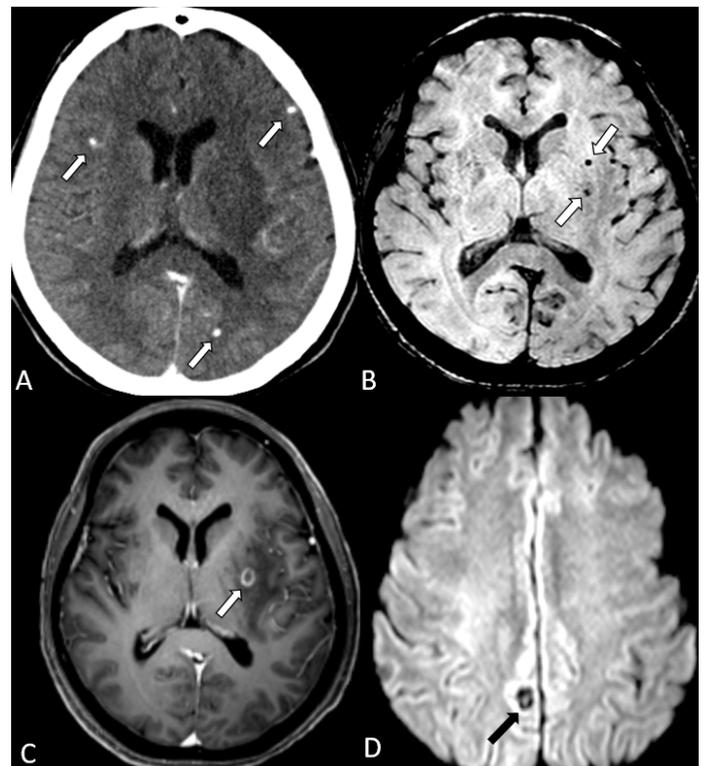


FIGURE 1: (A) Axial computed tomography reveals multiple sub-centimeter calcified lesions (arrows) predominantly throughout the supratentorial brain. (B) Axial susceptibility-weighted imaging (SWI) demonstrates multiple round hypointense foci, consistent with calcifications (arrows). (C) Axial contrast-enhanced T1-weighted image (WI) reveals a cystic ring-enhancing lesion (arrow) with perilesional edema in the left putamen. (D) Axial diffusion-weighted imaging (b=1000) reveals a hyperintense eccentric dot (scolex, arrow) indicative of neurocysticercosis in the colloidal vesicular stage.

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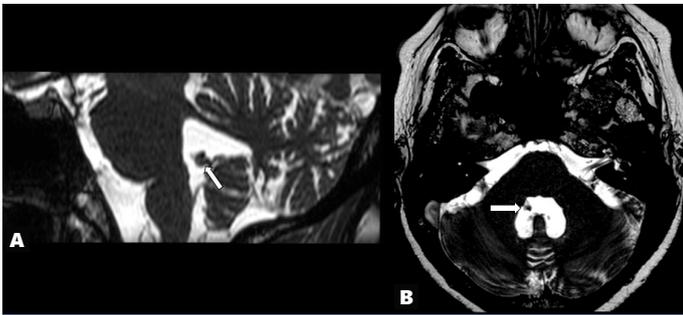


FIGURE 2: Sagittal and axial fast imaging, employing steady-state acquisition images (A and B) demonstrate an isointense lesion in the lower portion of the roof of the fourth ventricle (arrow). Steady-state free precession sequences help identify intraventricular cysts.

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FIGURE 3: Coronal (A and B) non-contrast-enhanced computed tomography with maximum intensity projection reveals multiple elongated and oval-shaped calcified lesions within the hip and thigh muscles.

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