

## Differentiating colloid cyst from intraventricular cysticercus: Case of a ventricular cyst in a patient with neurocysticercosis

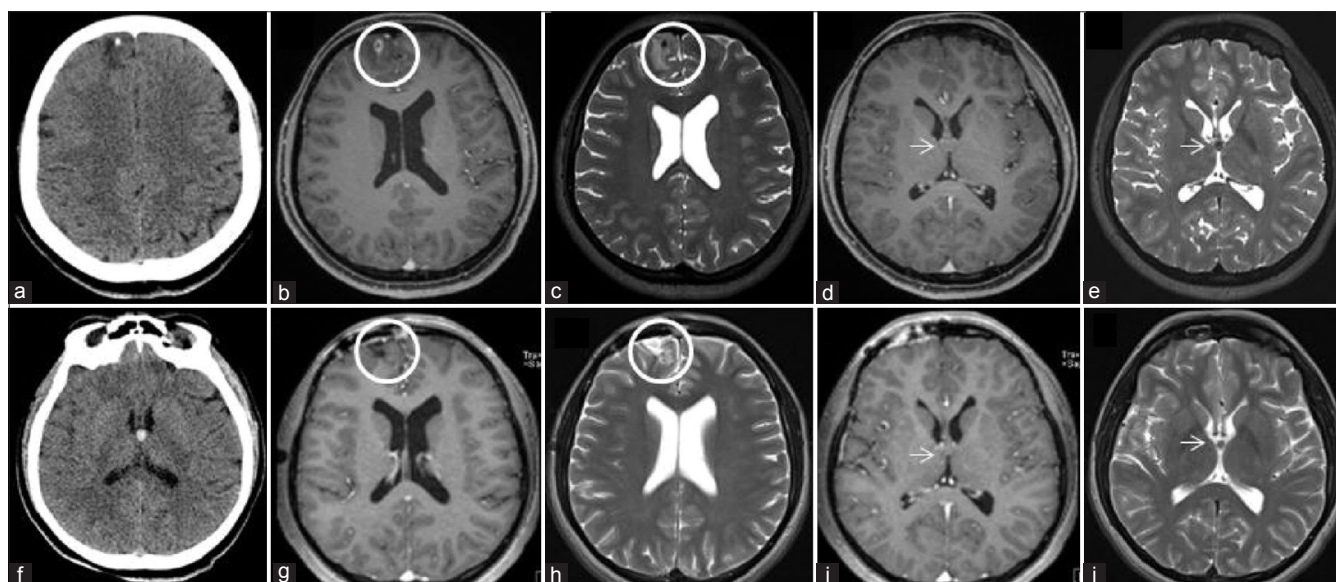
Sir,

We present a patient with intraparenchymal neurocysticercosis and an anterior third ventricular mass believed to be a colloid cyst. We elected to surgically evacuate the parenchymal cysticercus lesion and conservatively follow the third ventricular cyst which remained stable on repeat neuroimaging at a time interval of 3 months.

A 22-year-old female immigrant from Honduras presented with headache and seizures. Brain CT and MRI [Figure 1a-f] demonstrated an enhancing right frontal lesion with perilesional edema and a non-enhancing lesion in the midline anterior third ventricle without evidence of

hydrocephalus. Since we believed the intraparenchymal lesion was causing the patient's seizures, a craniotomy was performed to resect the right frontal lesion which was identified on histopathology to be neurocysticercosis. The patient was treated with an antiepileptic and a short course of steroids without antiparasitic therapy given the slight but undeniable risk of ventriculitis if the intraventricular lesion was a cysticercus. At 3 months follow-up the patient remained neurologically intact without further headaches or seizures and brain MRI showed unchanged appearance of the presumed colloid cyst without evidence of residual right frontal abscess [Figure 1g-j]. CSF and serum analysis for neurocysticercosis were negative at last follow-up. We are currently monitoring the patient with serial neuroimaging.

Neurocysticercosis is the most common parasitic infection of the central nervous system, affecting the ventricular system in 15-54% of cases.<sup>[1]</sup> Intraventricular neurocysticercosis of the third ventricle may be difficult to distinguish from a colloid cyst.<sup>[2-4]</sup> Medical treatment of intraventricular neurocysticercosis is dangerous without CSF diversion as treatment-induced cyst rupture may result in florid parasitic ventriculitis. While the third ventricular lesion in this case was most likely a colloid cyst based on its neuroimaging characteristics, we could not absolutely rule out neurocysticercosis without



**Figure 1:** (a) Non-contrast brain CT, axial section, showing a hypodense lesion with a small focus of calcification in the right frontal lobe. This is neurocysticercosis, and the calcified focus represents the scolex of the cysticercus. Brain MRI (b) T1-weighted post-contrast and (c) T2-weighted, axial sections at the level of the right frontal intraparenchymal neurocysticercosis lesion shows a ring-enhancing mass, measuring  $6 \times 7$  mm in size, with perilesional edema in the surrounding anterior medial frontal lobe (circle). Brain MRI (d) T1-weighted post-contrast and (e) T2-weighted, axial sections at the level of the anterior third ventricular lesion shows a non-enhancing mass most consistent with a colloid cyst (arrow). (f) Non-contrast brain CT, axial section, showing a hyperdense lesion in the anterior third ventricle without evidence of obstructive hydrocephalus. This is the typical appearance of a colloid cyst on CT. Post-operative brain MRI performed 3 months following craniotomy for resection of the right frontal cysticercus. (g) T1-weighted post-contrast and (h) T2-weighted axial sections at the level of the evacuated neurocysticercosis lesion shows post-operative changes of a craniotomy without evidence of residual or recurrent infection (circle). (i) T1-weighted post-contrast and (j) T2-weighted axial sections at the level of the third ventricular lesion shows unchanged appearance of the mass presumed to be a colloid cyst (arrow).

surgical extirpation. The lack of hydrocephalus would have favored a transcallosal over a neuroendoscopic approach.<sup>[5]</sup> We decided the risk of morbidity associated with a transcallosal cyst resection was too high given its likely incidental nature. This is the first reported case of a colloid cyst in the setting of neurocysticercosis.

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