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Teaching NeuroImage: Cryptococcosis in the central nervous system mimicking neurocysticercosis

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A 51-year-old man presented with headache, paresthesias of the legs and arms, and seizure. MRI showed multiple cystic lesions with dot sign and gadolinium enhancement (Figures 1 and 2). The findings are reported to be pathognomonic of neurocysticercosis in the colloidal stage; however, brain tumors and cryptococcosis can mimic it. In this case *Cryptococcus* Gatti was isolated from the cerebrospinal fluid. Despite treatment with amphotericin B and fluconazole, the patient died. There are important imaging differences between

neurocysticercosis and cryptococcosis. In neurocysticercosis usually there is no post-contrast enhancement of the dot sign.

Cryptococcosis encephalitis is a difficult-to-treat disease that can affect immunosuppressed or immunocompetent patients.^{1,2}

Figure 1: MRI of a patient with cryptococcosis mimicking neurocysticercosis - supratentorial findings.

(A) Axial T2WI shows multiple cystic lesions, one in the left occipital lobe with dot sign (arrows in A and B). Axial FLAIR shows vasogenic edema around most lesions (C). Axial T1WI post gadolinium shows peripheral and dot sign enhancement (D). Dot sign is a nodule within a cystic lesion.

Figure 2: MRI of a patient with cryptococcosis mimicking neurocysticercosis - infratentorial findings.

(A) Axial T2WI shows two cystic lesions in the right cerebellar hemisphere with dot sign (arrows in A and B). Axial DWI shows dot sign (C). Axial T1WI post gadolinium shows nodular and dot sign enhancement (D).

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References

- 1 - Loyse A, Moodley A, Rich P, et al. Neurological, visual, and MRI brain scan findings in 87 South African patients with HIV-associated cryptococcal meningoencephalitis. *J Infect* 2015;70:668-675.
- 2 - Chen S, Chen X, Zhang Z, Quan L, Kuang S, Luo X. MRI findings of cerebral cryptococcosis in immunocompetent patients. *J Med Imaging Radiat Oncol* 2011;55:52-57.

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