

Teaching NeuroImages: Central nervous system tuberculomas

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A 10-year-old girl presented with 3 weeks of headache, fever, anorexia, and horizontal diplopia after recent travel to India. She was found to have right abducens nerve palsy.

Brain MRI showed multiple ring enhancing lesions (figure 1). The differential included neurocysticercosis, toxoplasmosis, histoplasmosis, blastomycosis, tuberculosis, and metastatic brain lesions.¹ The presence of cranial nerve findings, diffuse meningeal and especially basilar enhancement, and both supratentorial and infratentorial lesions favored tuberculosis. The involvement of the interpeduncular fossa, choroid plexus, and optic chiasm; arterial narrowing at the base of the brain; and target signs (central calcifications of the lesions on CT) were other findings suggestive of tuberculosis. Her chest X-ray was unremarkable. The CSF analysis showed elevated protein (130 mg/dL), low glucose (19 mg/dL, with serum glucose 76 mg/dL), and 110 mononuclear cells/mm³. Brain biopsy (figure 2) confirmed the diagnosis of tuberculosis. She had marked improvement on rifampicin, isoniazid, pyrazinamide, ethambutol, and dexamethasone.

REFERENCE

1. Sonmez G, Ozturk E, Sildiroglu HO, et al. MRI findings of intracranial tuberculomas. *Clin Imaging* 2008;32:88-92.

Figure 2 Necrotizing granuloma (A), granuloma with epithelioid and multinucleated histiocytes (B), multinucleated histiocyte (arrow) (C), and acid-fast stain showing mycobacterium (arrow) (D)

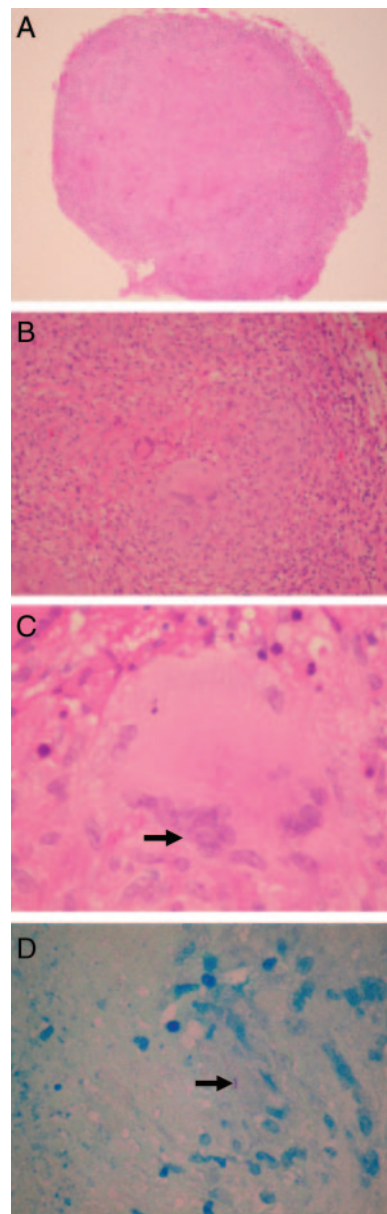
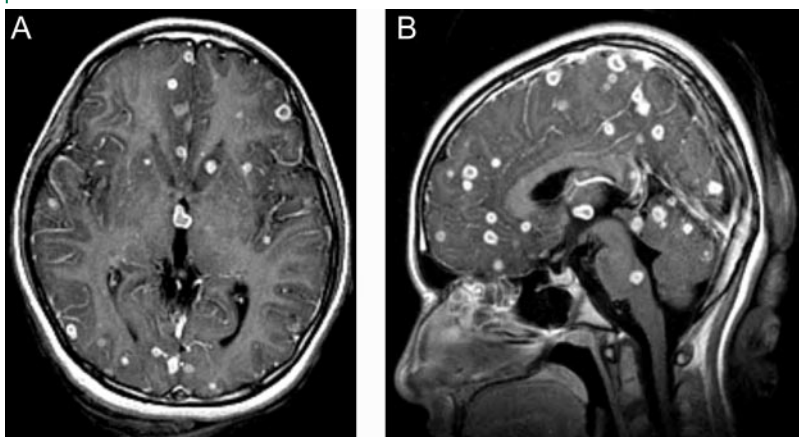


Figure 1 T1-weighted contrast MRI, axial (A) and sagittal (B), showing multiple ring-enhancing lesions, basilar meningitis, and posterior fossa involvement



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