

## Images in Infectious Diseases

# Granulomatous amebic encephalitis caused by *Acanthamoeba* sp. in an immunocompetent Mexican adult

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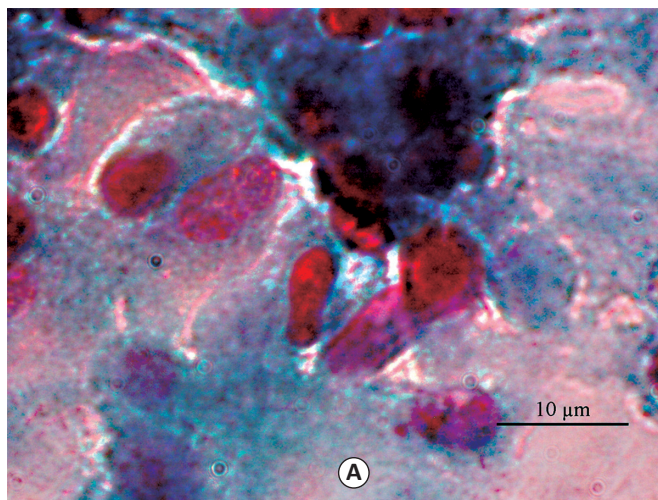
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A 41-year-old Mexican male presented with a 5-month history of simple partial seizures that were initially treated with valproic acid. Upon admission to a hospital in Monterrey, Mexico, he experienced progressive deterioration in consciousness, intense headache, vomiting, and recurrent seizure episodes. His past medical history was unremarkable. A magnetic resonance imaging scan revealed a frontoparietal tumor in the right cerebral hemisphere with a midline shift, which was suspected to be a primary cerebral glioma. The patient underwent a surgical excision of the brain lesion. The postoperative histological diagnosis was granulomatous amebic encephalitis. Biopsy examination using the Gömöri trichrome stain demonstrated the presence of numerous *Acanthamoeba* cysts and trophozoites (**Figure A**, 200X). The patient was treated with a combination of rifampin, trimethoprim/sulfamethoxazole, fluconazole, and metronidazole; amphotericin B was eventually added to the regimen. The patient died 3 months after the initial diagnosis of granulomatous amebic encephalitis. *Acanthamoeba* sp. infection was confirmed postmortem through immunohistochemical staining.

Granulomatous amebic encephalitis is a serious infection of the brain and spinal cord caused by the free-living amoeba *Acanthamoeba* spp. or *Balamuthia* spp., when contaminated water enters the nose of a human host. *Acanthamoeba* is a eukaryotic genus of microorganisms that cause rare but severe infections of the eye, central nervous system, and skin. As free-living protozoans, *Acanthamoeba* species are found in environmental sources such as water and soil<sup>1-3</sup>. A retrospective review of the case revealed a history of exposure to water from a tank connected to a waterwheel, offering a likely explanation for infection acquisition.



### Conflict of interest

The authors declare that have no conflicts of interest.

### REFERENCES

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