

Teaching NeuroImages: Acute cerebellitis caused by *Salmonella typhimurium*

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A 63-year-old woman presented with 24 hours of dysarthria, confusion, and appendicular ataxia preceded by watery diarrhea, without fever, nausea, vomiting, meningeal signs, recent travel, or antibiotic use. She had type II diabetes and gastroesophageal reflux disease (on proton pump inhibitor). She had consumed inadequately cooked beef stew left at room temperature for 24 hours. Blood cultures were positive for *Salmonella typhimurium*. CSF showed 15 nucleated cells, 72% monocytoid; remainder of CSF was normal. MRI was consistent with cerebellitis (figure). At 3 months, after 3 weeks of IV ceftriaxone, she remained dysarthric with bilateral dysmetria.

CNS involvement is commonly associated with enteric fever; however, cerebellitis is rare and more commonly associated with *Salmonella typhi* in children in endemic areas.^{1,2} In a large case series of 791 patients with enteric fever, 10 had cerebellitis, 9 of whom developed ataxia in the second week of illness.² All 10 of the cases with cerebellitis had normal CSF and CT scans.² Mild pleocytosis has been reported in acute cerebellar ataxia associated with enteric fever.³ We illustrate a rare

case of cerebellitis with MRI changes occurring within 72 hours of *S typhimurium* infection in a 63-year-old patient from a nonendemic area.

AUTHOR CONTRIBUTIONS

Dr. Rizek, Dr. Morriello: study design and concept. Dr. Rizek: drafting the manuscript. Dr. Sharma: revising the selected imaging and figure legend. Dr. Gofton: revising the manuscript.

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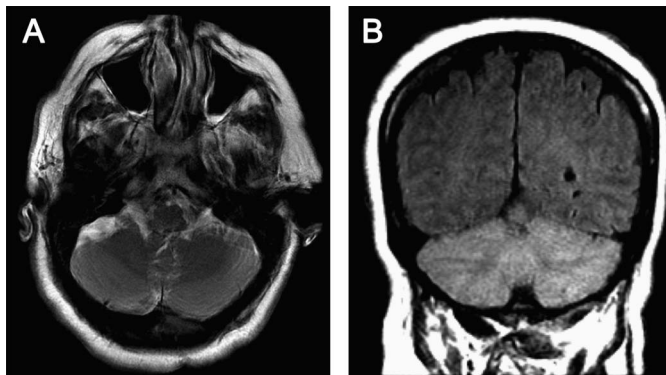
DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

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Figure Brain MRI



Bilateral sulcal effacement and diffuse hyperintense signal noted in the cerebellum on axial T2 sequence (A), with diffuse hyperintense signal more appreciable on coronal fluid-attenuated inversion recovery sequence (B), consistent with cerebellitis.

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