

Teaching NeuroImages: Frontal lobe *Streptococcus* abscess

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Neurology® 2019;93:e1032-e1033. doi:10.1212/WNL.0000000000008075

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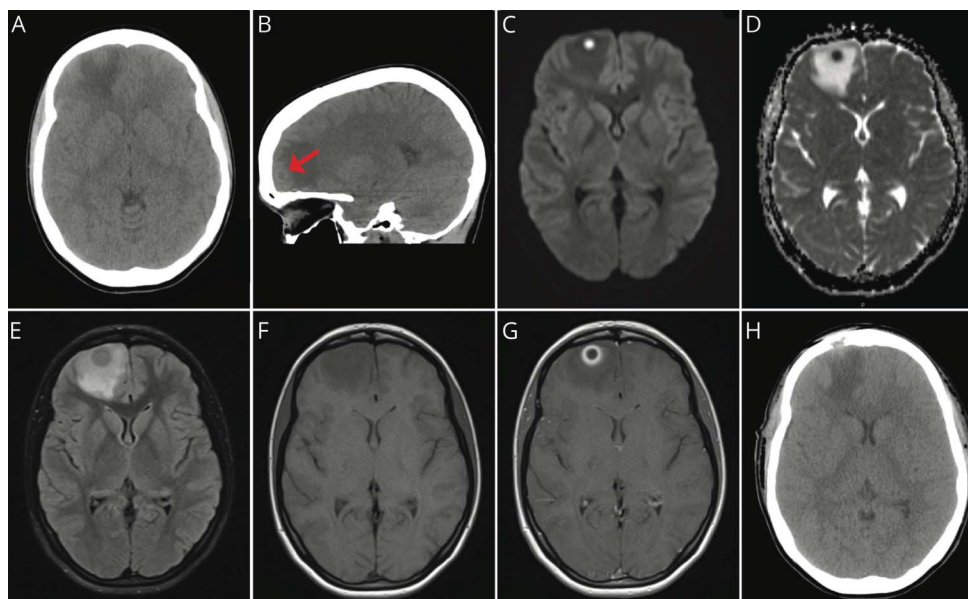
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A 21-year-old woman presented with a generalized tonic-clonic seizure, followed by 2 days of worsening headache. She was afebrile with normal serology and normal fundoscopic and neurologic examination. CT head showed a frontal mass with surrounding edema concerning for primary brain tumor, demyelination, metastases, or infection. MRI brain revealed a ring-enhancing lesion characteristic for brain abscess.¹ CSF cultures grew *Streptococcus intermedius* and the source was presumed to be from dental cleaning 2 weeks prior.² Review of original scans revealed a faint hyperdense ring (figure, B), highlighting this pertinent radiologic finding and importance of considering abscess in patients with frontal lobe lesion, even in the absence of infectious findings.

Author contributions

T.J. Peng: drafting the manuscript, study concept and design, analysis and interpretation of data, acquisition of data. J. Cormier: revising the manuscript for content, analysis and interpretation of data. S.F. Wesley: revising the manuscript for content, study concept and design, analysis and interpretation of data, study supervision and coordination.

Figure MRI sequence of brain abscess



(A) Axial non-contrast-enhanced CT scan of head on admission to hospital shows right frontal mass with surrounding hypodense zone consistent with edema. (B) Sagittal non-contrast-enhanced CT scan with red arrow showing well-circumscribed mass with hyperdense rim and hypodense center surrounded by a large area of hypodense edema. (C) Diffusion-weighted imaging (DWI) shows a hyperintense signal within the abscess. (D) Apparent diffusion coefficient imaging shows an area of hypointensity in the center correlating with hyperintense DWI signal. (E) Fluid-attenuated inversion recovery shows hyperintense area of edema surrounding abscess. (F) T1 precontrast imaging. (G) T1 postgadolinium imaging shows avid ring enhancement. (H) Axial CT scan of patient after craniotomy and washout with diminished abscess.

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Go to Neurology.org/N for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

Study funding

No targeted funding reported.

Disclosure

T.J. Peng and J. Cormier report no disclosures relevant to the manuscript. S.F. Wesley is a former editorial board member for the *Neurology*[®] *Resident & Fellow Section* and currently

serves as a peer reviewer for *Neurology*[®]. Go to Neurology.org/N for full disclosures.

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This information is current as of September 2, 2019

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