

Teaching NeuroImage: Ultrafast Dynamic CT Myelography for the Identification of Leakage Level in Multiple Meningeal Diverticula

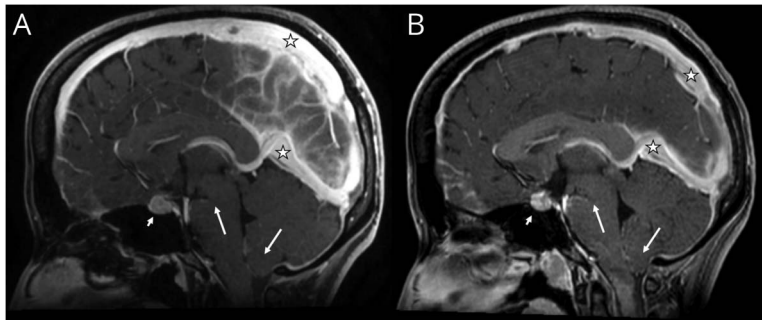
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Figure 1 Brain MRI



Midline sagittal T1-weighted contrast-enhanced images showing diffuse venous sinus engorgement (stars), pituitary enlargement with effacement of the suprasellar cistern (short arrows), and sagging of posterior fossa structures with reduced mamillopontine distance (long arrows). MRI at first presentation (A) and 1 year later after relapsing symptoms and before surgical treatment (B).

A 26-year-old woman presented with symptoms of orthostatic headache for 1 year that temporarily improved after 2 nontargeted epidural blood patches. Despite this intervention, she had persistent radiologic signs of CSF hypotension (Figure 1) and multiple meningeal diverticula on conventional CT myelography (Figure 2, A and C). Ultrafast dynamic CT myelography confirmed only 1 T8-T9 right-side meningeal diverticula in the initial phases (Figure 2, B and D), with later opacification of the remaining diverticula. Surgical treatment resulted in symptom resolution.

Ultrafast dynamic CT myelography can identify ventral dural tears, leaking meningeal diverticula and CSF-venous fistula, with superior contrast and temporal resolution than MRI. Greater radiation exposure is necessary^{1,2} and should be balanced against diagnostic precision.

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Disclosure

The authors reports no relevant disclosures. Go to [Neurology.org/N](https://www.neurology.org/N) for full disclosures.

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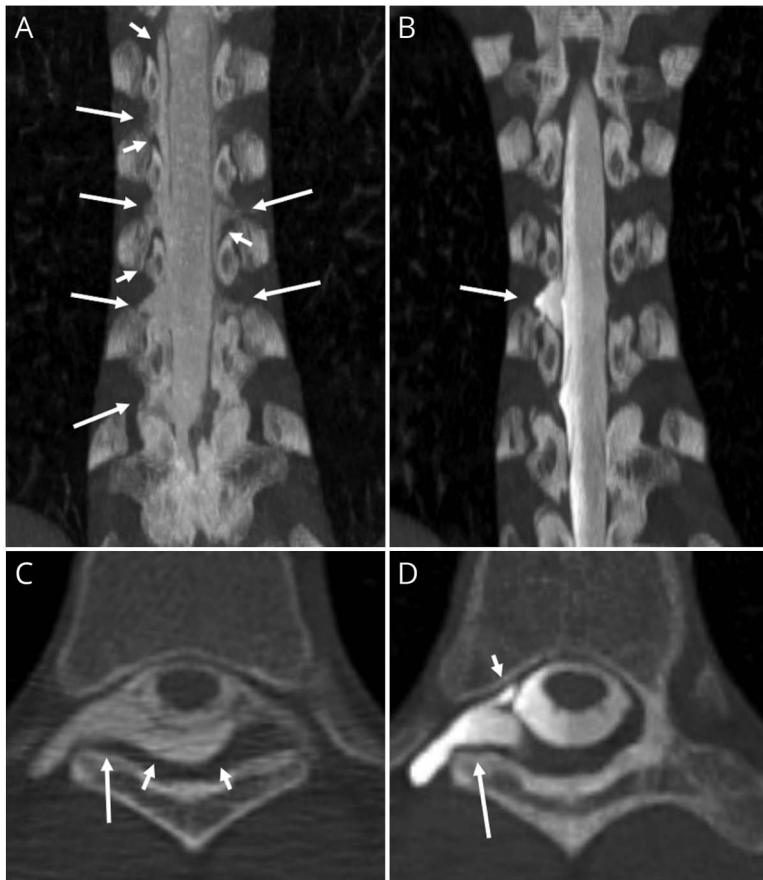
Teaching slides

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Figure 2 CT Myelography



Coronal conventional CT myelography shows multiple meningeal diverticula (long arrows) and leakage of intrathecal contrast to the epidural spaces (short arrows) (A, C). Ultrafast dynamic myelography shows opacification of only 1 large diverticula at the right side of T8-T9 (B, D) in the initial phases, with later opacification of the remaining diverticula (not shown).

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Name	Location	Contribution
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Appendix (continued)

Name	Location	Contribution
Mohammed Ali Hussein, MD	Instituto de Neurologia de Curitiba, Paraná, Brazil;	Major role in the acquisition of data; analysis or interpretation of data
Kristofer Fingerle Ramina, MD	Instituto de Neurologia de Curitiba, Paraná, Brazil;	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; analysis or interpretation of data

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