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

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Figure 1 Brain MRI

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 necessary1,2 and should be balanced against diagnostic precision.

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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).

Appendix Authors

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References

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