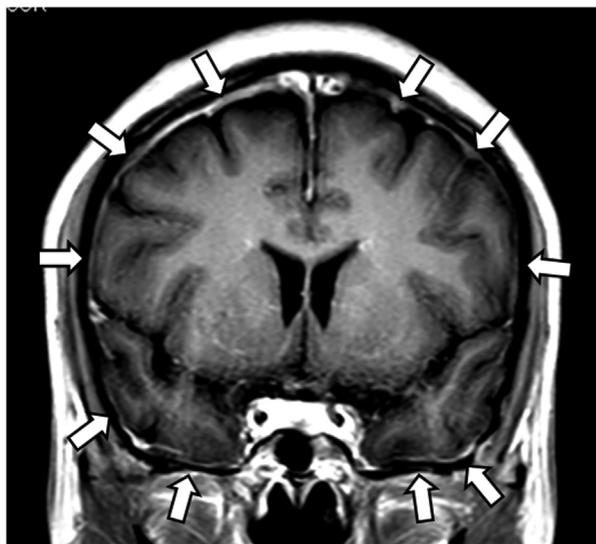




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**Figure 1.** Gadolinium-enhanced T1-weighted head MRI (axial view) revealing pachymeningeal enhancement (arrows).



**Figure 2.** T2-weighted fat-suppressed spinal MRI (sagittal view) revealing abnormal high intensity at the upper cervical spinal cord (arrow), which suggested a cerebrospinal fluid leak.

[Ann Emerg Med. 2019;74:e13-e14.]

A 41-year-old female nursing staff member presented to the hospital, complaining of a gradual-onset headache that worsened when she was standing. Two hours before the headache onset, she had lifted a large patient by herself, with significant straining. Opening pressure on a cerebrospinal fluid examination was extremely low, at 0.5 cm H<sub>2</sub>O. Head magnetic resonance imaging (MRI) revealed pachymeningeal enhancement (Figure 1, arrows). Spinal MRI revealed abnormally high intensity (Figure 2, arrow), which suggested a cerebrospinal fluid leak.

*For the diagnosis and teaching points, see page e14.*

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## IMAGES IN EMERGENCY MEDICINE

*(continued from p. e13)***DIAGNOSIS:**

*Spontaneous intracranial hypotension.* The patient received a diagnosis of spontaneous intracranial hypotension and received a lumbar epidural blood patch of autologous blood, which completely eliminated the headache immediately after the therapy. No recurrence was noted after discharge.

Spontaneous intracranial hypotension, which is caused by spontaneous spinal cerebrospinal fluid leaks, is a rare but treatable cause of a positional headache that worsens when patients are upright.<sup>1-3</sup> This condition is typically preceded by minor trauma, such as trivial falls, coughing, and lifting.<sup>1-3</sup> As diagnostic images, the 5 characteristic MRI findings of spontaneous intracranial hypotension are subdural fluid collections, enhancement of the pachymeninges, engorgement of venous structures, pituitary hyperemia, and sagging of the brain.<sup>2</sup> Magnetic resonance myelography or computed tomographic myelography and nuclear cisternography might be necessary to confirm the presence of the cerebrospinal fluid leak.<sup>1-3</sup> The mainstay of treatment is an injection of autologous blood into the spinal epidural space.<sup>2,3</sup>

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