Epidural Blood Patching for Spontaneous Intracranial Hypotension in a Teenager

Shu Zhao MD, Nicolas Maxymiv DO
Virginia Commonwealth University Health, Department of Anesthesiology

"Making Waves"
25th Annual Pain Medicine Meeting
November 5-7, 2026 | Tampa, Florida

Introduction

- Spontaneous intracranial hypotension (SIH) results from a non-iatrogenic spinal CSF leak due to a dural tear
- Rare in pediatric population
- Presents with orthostatic headache
- Impairs quality of life
- Conservative management
  - If failed, epidural blood patching

Imaging

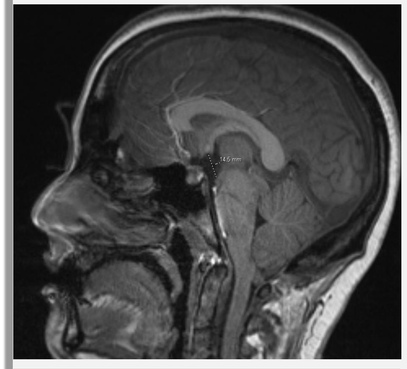


Figure 1: T1 Sagittal view showing sagging of the cerebellar tonsils consistent with CSF leak

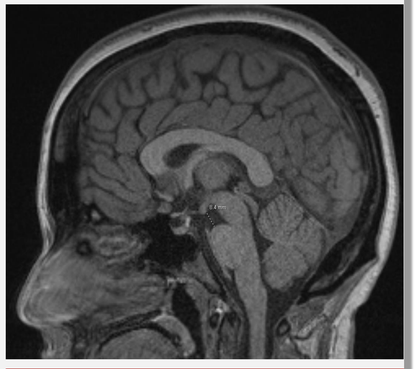


Figure 2: T1 Sagittal view showing resolution of the cerebellar sagging

Case Report

14yoF with PMH of migraines	• Presented to ED for persistent severe headaches with photophobia and hyperacusis • Eye exam showed no papilledema • Discharged on OTC headache meds
Returned 2 months later to ED	• MRI showed multi-focal, small dural tears which suggest SIH
APS consulted	• Performed non-targeted epidural blood patch • Symptoms improved
Return of symptoms 2 days later	• Referred to interventional pain clinic
Interventional pain visit 2 weeks later	• Performed a targeted fluoroscopically-guided therapeutic interlaminar epidural blood patch • Symptoms improved
Neurology visit 3 months later with return of symptoms	• Repeat MRI show improvement in intracranial hypotension without evidence of new leak • Rheum and genetic workup negative for connective tissue disease • Recommended med management

Discussion

- Systematic review and meta-analysis show no statistical difference in outcomes between targeted and non-targeted epidural blood patching in adults
- Less research in the pediatric population
- Efficacy of repeat blood patching and minimal time between procedures still need more research
  - Currently recommend 2-3 weeks
- Number of epidural blood patching one should get for symptomatic relief unknown

References

1.Schievink WI, Maya MM, Louy C, Moser FG, Sloninsky L. Spontaneous Intracranial Hypotension in Childhood and Adolescence. *The Journal of Pediatrics*2013;163(2):504-510.e3. doi:10.1016/j.jpeds.2013.01.055

2. Spontaneous Intracranial Hypotension. Accessed August 9, 2026. https://rarediseases.org/rare-diseases/spontaneous-intracranial-hypotension/

3. Mokri B. Spontaneous intracranial hypotension. *Current Neurology and Neuroscience Reports*2001;1(2):109-117. doi:10.1007/s11910-001-0005-y

4. Callen AL, Friedman DI, Parikh S, et al. Diagnosis and Treatment of Spontaneous Intracranial Hypotension. *Neurology Clinical Practice*2024;14(3). doi:10.1212/cpj.0000000000200290

5. Palermo M, Sturiale CL, D'Arrigo S, Trevisi G. Targeted Versus NonTargeted Epidural Blood Patch for Spontaneous Intracranial Hypotension: A Systematic Review and Meta-Analysis. *European Journal of Neurology*2025;32(6). doi:10.1111/ene.70239