Refractory Postdural Puncture Headache (PDPH): The Role of Connective Tissue Disorder?

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Background

- Postdural puncture headache (PDPH) is a complication of neuraxial anesthesia with an incidence of up to 88% following unintentional dural puncture (UDP)¹
- Common risk factors include young age, female sex, and pregnancy. ٠
- Complications include cerebral venous thrombosis and subdural hematoma, chronic headaches, and depression.
- Recent studies also suggest an association between connective tissue ٠ disorders (CTD) and PDPH²





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Case

34-year-old G3P1 at 37w0d with PMH migraines admitted for IOL. CSE was complicated by UDP, replaced one level below with adequate analgesia

Positional headache and neck pain noted immediately after NSVD. Conservative management ineffective. EBP #1 performed 4h later on PPD0

Symptoms returned after a few hours on PPD0. A sphenopalatine ganglion block was performed, which provided 8h of relief

On PPD1, EBP #2 performed due to recurrent headache. The patient experienced relief and was discharged home on PPD2.

Re-admitted PPD3 with identical symptoms. During repeat history and physical, *patient endorsed above average flexibility and exhibited joint hypermobility on exam.* Imaging recommended

MRI spine showed extensive CSF leak lumbar spine to C1 and intracranial hypotension on brain MRI. EBP #3 performed on PPD5

EBP #3 provided relief of symptoms, and patient was discharged on PPD6 with APS follow-up. She remains headache free.

Figure 1: Longitudinal extradural collection on spine MRI and intracranial hypotension on MRI brain.





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Discussion

- Factors that predispose patients to refractory PDPH are poorly understood, but we hypothesize that an underlying connective tissue disorder may have predisposed this patient to a significant CSF leak
- Connective tissue disorders are common among patients with ٠ spontaneous CSF leaks, possibly due to dural weakness
- Standard management was followed for this patient's refractory PDPH ٠ (Figure 2). Though she did not have a formal CTD diagnosis, clinical suspicion was high given the severity symptoms, joint laxity, and several failed EBPs

Key Points

Consider CTD and pursue imaging early for patients who fail EBP to rule out more serious underlying pathologies

References

1. Choi PT et al. Can J Anaesth. 2003 PMID: 12734154. 2. Youngblood SC et al. J Thorac Cardiovasc Surg. 2013 PMID: 23434451.



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