Beyond post-dural puncture headaches: Subdural hematomas after neuraxial placements

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Subdural hematoma (SDH)

- Rare, potentially life-threatening
- Incidence: 1.5 per 100,000 deliveries
- **Increases with post dural puncture headache (PDPH):** 147 per 100,000 deliveries
- Theorized mechanism:
  - CSF leak → intracranial hypotension and traction on bridging veins → SDH

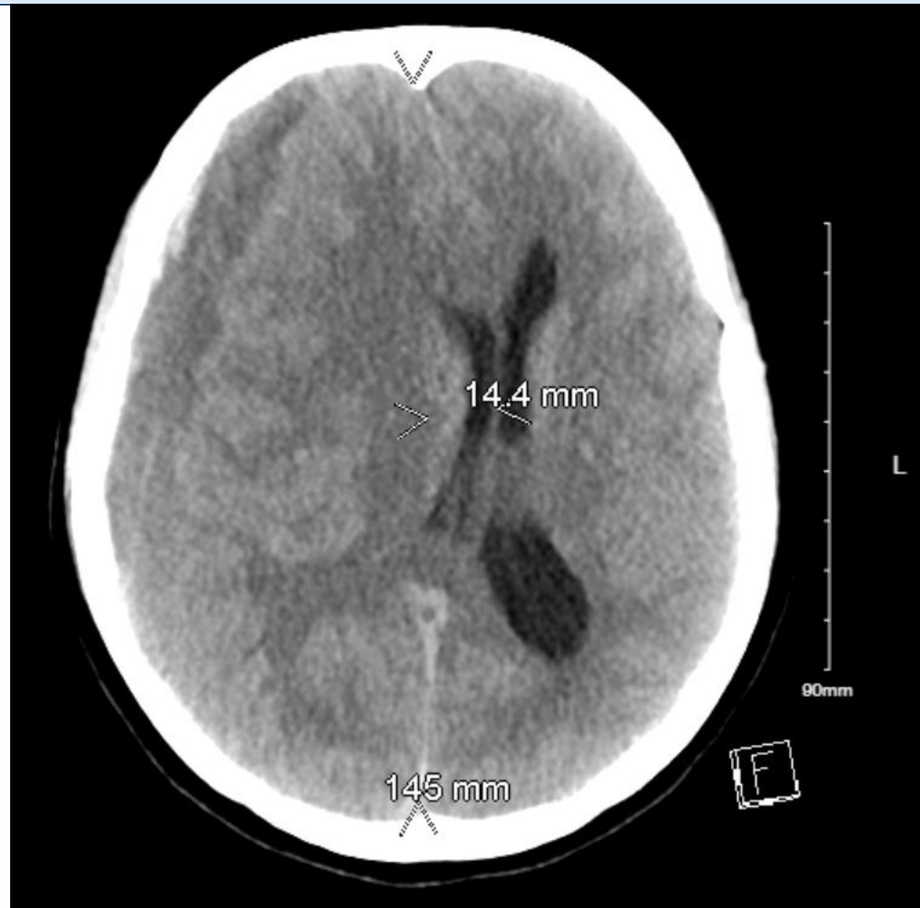

Fig. 1. CT Brain showing 19 mm right frontoparietal SDH with 14 mm midline shift

Case 1	Case 2
29 yo multigravida 39w2d admitted for rCD •Neuraxial: 3 attempt CSE •Uncomplicated rCD •POD 1: Non-positional, frontal headache, neck pain •POD 2: EBP for PDPH with brief resolution •POD 3: Refused repeat EBP or additional hospital stay, discharged •5 weeks postpartum: ED with severe, non-positional headache, emesis, and syncope •Head CT: 19mm right frontoparietal subdural hematoma with mass effect; 14mm left midline shift •Neurosurgery performed STAT craniotomy for SDH evacuation, discharged home on POD2	37 yo multigravida 40w1d admitted for active labor •Neuraxial: 2 attempt DPE •Uncomplicated SVD •PPD 2: Discharged •PPD 5: OSH ED, worsening bilateral neck pain and positional headache •Brain MRI: Bilateral SDHs (left: 5 mm, right: 2 mm), consistent with intracranial hypotension secondary to CSF leak •EBP performed with symptom resolution •Declined further recommended monitoring, left AMA

	PDPH	Subdural hematoma
Onset	12-72 hours after dural puncture	Delayed >5 days
Character	Positional	Severe, persistent, non-positional
Location	Bilateral frontal, occipital, or retro-orbital	Focal or unilateral
Associated symptoms	Neck stiffness, nausea, photophobia, tinnitus	Fever, AMS, vomiting, focal deficits
Treatment	Hydration, caffeine, rest EBP (gold standard)	Neurosurgical intervention, EBP, inpatient observation

Loss of positional nature, neurological deficits, AMS

Parkland

References: 1. JAMA Neurol 2020, 77(1):65, 2. Regional Anesthesia & Pain Medicine 2016, 41:628

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