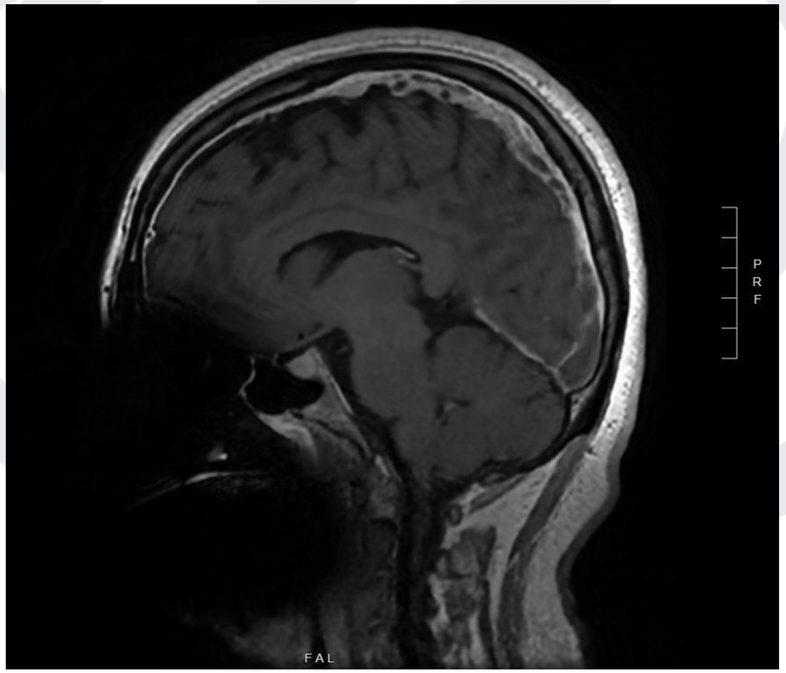
Cerebral Venous Sinus Thrombosis Following Suspected Post–Dural Puncture Headache After Neuraxial Labor Analgesia

Adrienne Clark MD, Ani Chilingirian MD, Man Kuan Lei MD, Pedram Aleshi MD

University of California San Francisco, Department of Anesthesia and Perioperative Care

Background

- PDPH incidence ranges from 2-40%; risk factors, diagnosis, and management have been widely reviewed[1]
- PDPH may be associated with more rare major neurologic complications including CVST[2]



1. Uppal et al. JAMA Netw Open. 2023;6(8):e2325387.
2. Guglielminotti et al. Anesth Analg. 2019 Nov;129(5):1328-1336.

Case Presentation

25yo G3P0020 at 39w6d presenting in labor

PMH

- Asthma, mild
- BMI 38
- Anemia (Hb 11)
- Labs otherwise normal
- Pregnancy course uncomplicated

Peripartum Course

- Epidural required multiple attempts
  - 1st attempt lateral
  - 2nd attempt sitting position
- CSE w LOR @ 12cm
- NSVD
- Discharged PPD2

Postpartum Course

- PPD4: positional HA, n/v, normal neuro exam, negative PreE workup
  - Counseled, preferred conservative mgmt
  - ASA/butalbital/caffeine
- PPD8: severe HA, neck stiffness
  - MRI w CVST and BL subdural collections

Management

- Admitted to neurovascular service, heparin ggt initiated
- Transitioned to enoxaparin for 6mo for provoked CVST
- Repeat imaging stable/improved
- Discharged PPD12

Teaching Points

- Dural puncture is considered an independent risk factor for CVST[3-4]
  - Explained through Virschow's triad
  - Consideration of other risk factors

- Differential for postpartum HA is broad
  - PDPH is common; pre-E, PRES, CVST, and SDH should be considered
  - Atypical onset and neurologic symptoms should trigger imaging

3. Rodrigues et al. Turk J Anaesthesiol Reanim. 2023 Apr;51(2):147-149.
4. Guner et al. Acta Neurol Belg. 2015 Mar;115(1):53-7.