Subdural Hematoma after Attempted Combined Spinal-Epidural Labor Analgesia

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A rare but serious complication of neuraxial anesthesia is subdural hematoma. We describe a case of subdural hematoma after combined spinal-epidural (CSE) labor analgesia.

Case Description: A 36-year old, healthy, term, G2P1 parturient requested neuraxial analgesia for labor pain. CSE was attempted using loss-of-resistance to air; a dural pop was perceived. There was no cerebral spinal fluid (CSF) return via the 17-G Tuohy or the 27-G Sprotte spinal needles despite attempts at 2 lumbar levels. Given the lack of CSF return, no spinal dose was administered. The epidural catheter was placed without difficulty and analgesia was appropriate. On post-partum day one, the patient reported neck stiffness and back pain along with a mild non-positional headache. 10 days after epidural placement the patient complained of headache and neck stiffness that had been stable since discharge and was interfering with her ability to care for her child. She also reported a clogged sensation in her left ear for two days, but she denied any other focal neurologic deficits. The headache was positional in nature but was not completely resolved with recumbent position. Post-dural puncture headache was suspected, so a trial of acetaminophen-caffeine-butalbital was prescribed. However, this provided only minimal improvement of the headache. Epidural blood patch was offered to the patient but she refused. On day 12 the headache persisted and the decision was made to pursue imaging. MRI demonstrated a small sub-acute subdural hematoma overlying the right frontal parietal lobe. Neurosurgery was consulted and recommended continuation of conservative management with follow-up imaging. CT obtained six weeks post-partum demonstrated complete resolution of subdural hematoma.

Discussion: Subdural hematoma is a rare complication of neuraxial anesthesia. Even so, cases of subdural hematoma after spinal anesthesia have been reported in the literature. Subdural hematomas in these reports generally resolved with conservative management; however, serious complications such as hemiplegia, blindness, or death have been reported. Symptoms that may differentiate subdural hematoma from a typical spinal headache include neurologic deficits or severe headache in the supine position with maintenance of a positional component. Mechanism of hematoma formation is thought to be due to rupture of bridging veins, stretched from descent of the brain as spinal fluid is lost through a puncture site in the dura. It is important to consider subdural hematoma in patients whose dura has been disrupted and who experience neurologic deficits or headache symptoms not consistent with a typical post-dural puncture headache.

References:
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