

# "I feel like a vessel burst in my head!": A case of pneumocephalus and pneumorrhachis from accidental dural puncture

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## • Patient Presentation

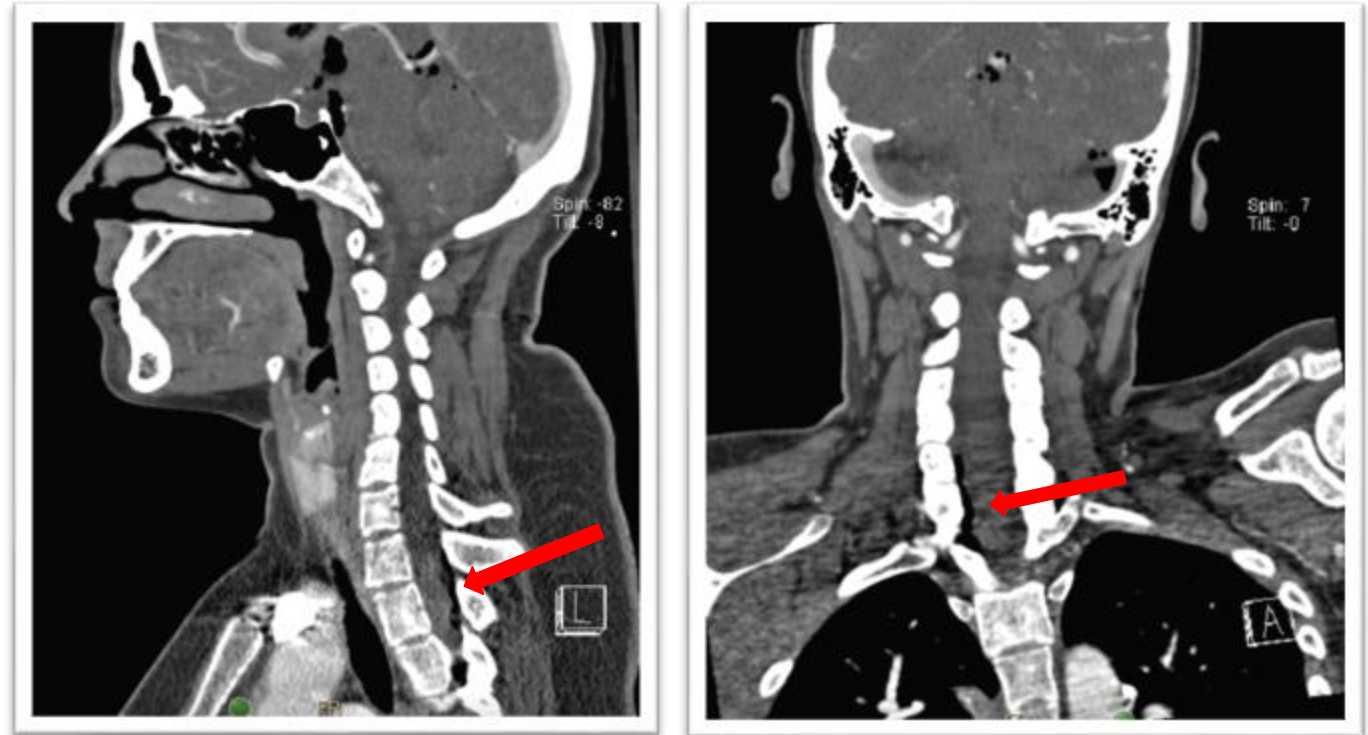
- During labor epidural placement, saline with **air bubble** used for LOR
- **Sudden onset, severe, left-sided and frontal thunderclap headache**
- **No evidence of ADP**
- Procedure aborted, patient flattened
- She remained neurologically intact
- After brief observation, epidural placed using **saline for LOR**
- **Concern for elevated ICP:** Bupivacaine 0.25% (10ml) **slowly loaded**
- Patient endorsed, **'felt like a vessel burst in my head'**
- **STAT CTA head and neck:** moderate intraventricular and subarachnoid **pneumocephalus** with mild dilation of lateral ventricles (image 1) and intradural/epidural **pneumorrhachis** of cervical/thoracic spinal canal (image 2, 3), respectively



**Image 1:** Moderate intraventricular and subarachnoid pneumocephalus with mild dilation of lateral ventricles

# What is Pneumocephalus and Pneumorrhachis?<sup>1</sup>

- Presence of intra -cranial and –spinal gas
- Rare complication of neuraxial anesthesia
- **Cause:** accidental injection of air *intrathecally* from LOR technique
- **Common Presentation:** sudden onset explosive HA during epidural placement in sitting position, particularly with known accidental dural puncture
- **Other symptoms:** non-positional HA, N/V, seizures, dizziness, cranial n. palsy, hemiparesis, encephalopathy

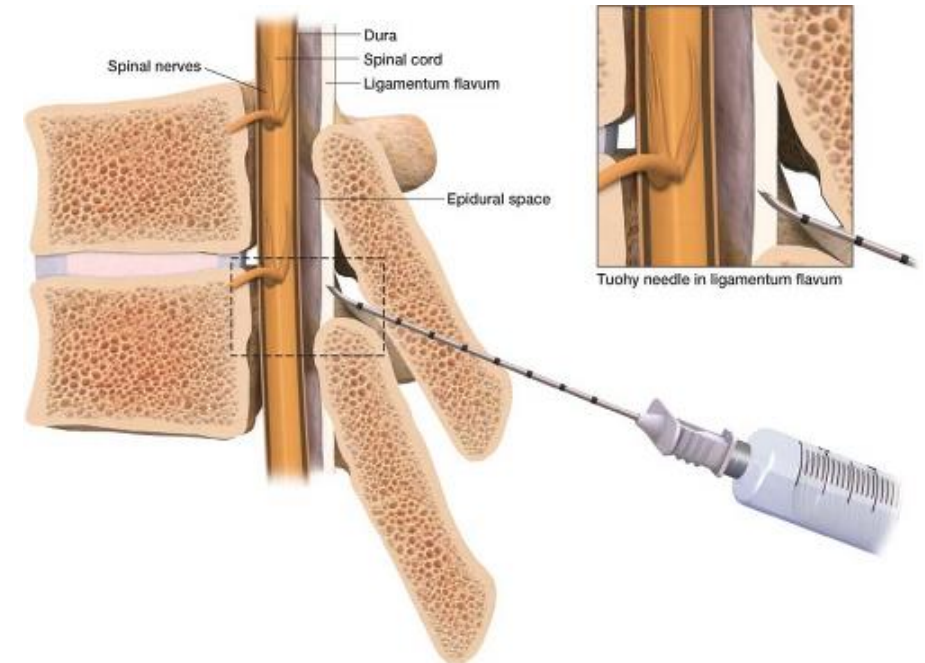


**Image 2, 3:** Intradural and epidural pneumorrhachis of cervical and thoracic spinal canal

# Management and How to Prevent?<sup>1</sup>

- **Treatment**

- Trendelenburg position
- High flow O<sub>2</sub>
- Supportive care (frequent neuro checks, pain control)
- Monitor for PDPH



<https://aneskey.com/epidural-catheter-analgesia/>

- **Prevention**

- Use *saline instead of air* during LOR
- Avoid ADP

**AIR**



**SALINE**

