

Pneumocephalus without obvious dural puncture in a laboring patient with prior lumbar discectomy

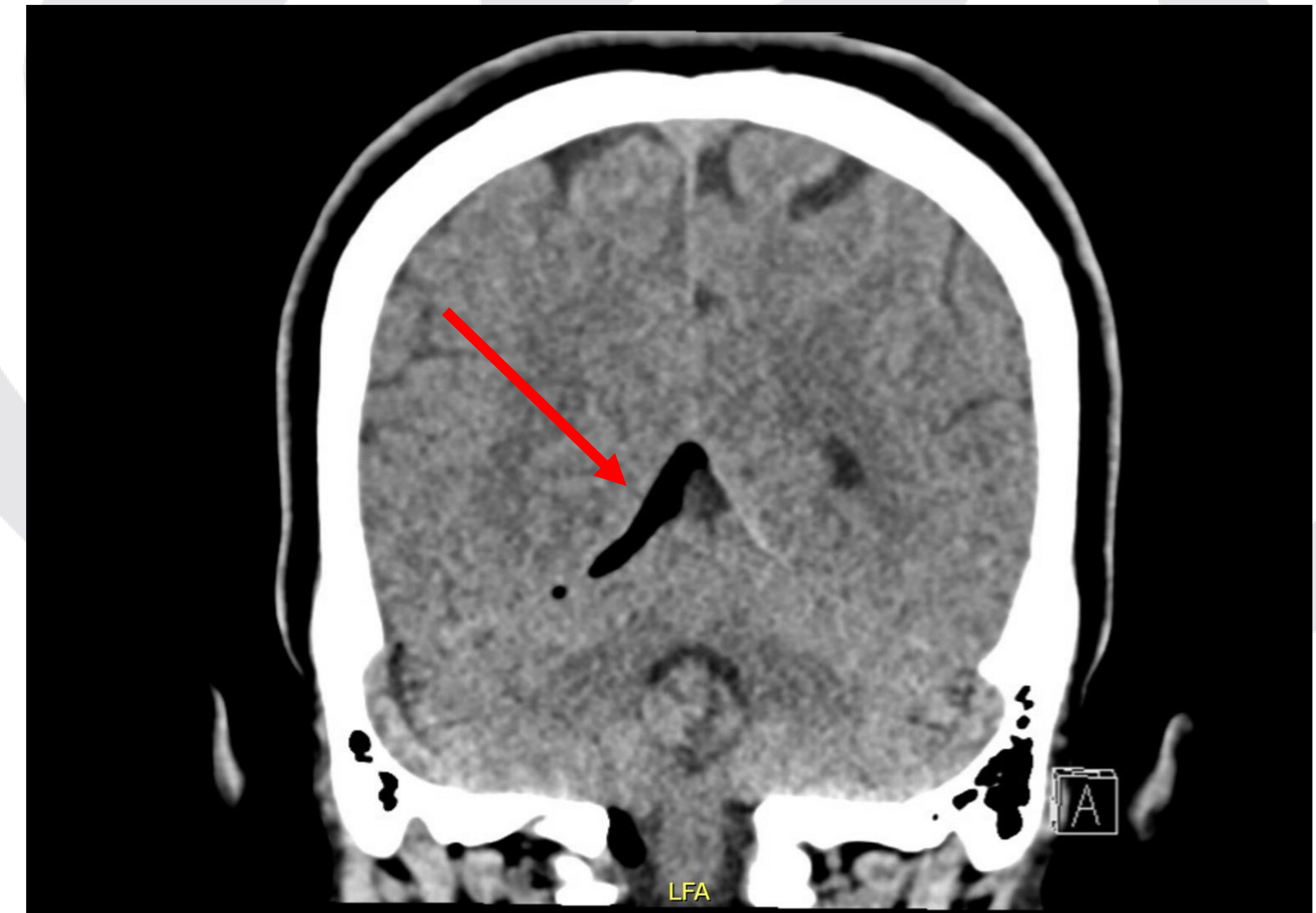
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Background

● No known best practice for parturients with prior discectomy receiving neuraxial

- Lumbar discectomy prevalence: 50-60 per 100,000 PYs in women 15-49yo¹
- No published prevalence of parturients w/ prior discectomy
- No difference in efficacy of neuraxial analgesia in prior discectomy vs control but more placement attempts required²

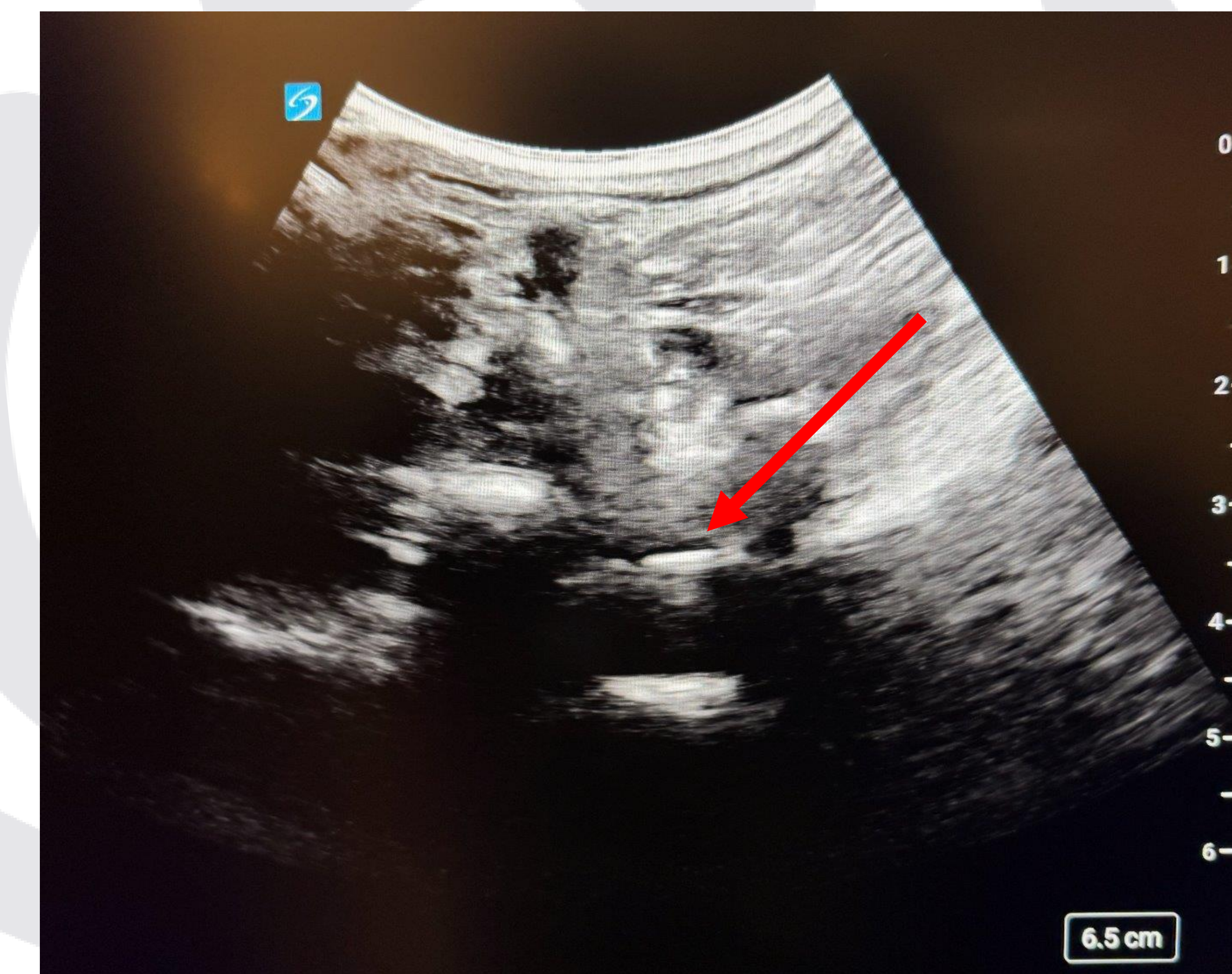


Case

●Pt: 36yo G2P1 with prior L4-5 discectomy in foreign country presented in labor

●OB Hx: Prior C/S under single shot spinal after spine surgery

	1 st Attempt	2 nd Attempt
Needle Placement	Mild heme return, 1 redirection	Uncomplicated
Location	L3-4	L2-3
Loss	Saline, 4cm	Air, 5cm
Aspiration	Negative	Negative
Test Dose Lido w/ Epi	3cc: Normal +5 min, 2cc: Sympathectomy w/ T4 motor block	1cc: Normal +5 min, 1cc: Motor block
Analgesia	2 mL/hr 0.25% bupi Inadequate Analgesia	2mL/hr 0.25% bupi 15mcg fentanyl IT with pushing
Outcome	+2 hr: Replaced catheter	+30 min: Non-dependent HA +3 hr: Uncomplicated NSVD w / adequate analgesia



Learning Points

● Signs of wet tap

- Most common: Intra-procedure free flowing clear fluid
- Aspiration: 43% false neg³
- Glucose Test: 38% false pos⁴

● Pseudomeningocele or CSF fistula after spine surgery is rare

- Incidence of delayed CSF fistula 0.27%-0.83%⁵
- Majority present asymptotically
- US imaging may be normal
- Consider pre-op clinic visit in post-surgical patients planning for neuraxial

	PDPH	Pneumocephalus
Onset	Gradual Hours to 5 days	Immediate <1 hr
Location	Occiput, Neck	Frontal, Temporal
Symptoms	N/V, dizziness, neck stiffness	Apathy, lethargy, hypophonia
Position	Worse upright	Non-postural
Mgmt	Epidural Blood Patch Analgesics	Poor analgesic response CT non-con HFNC/non-rebreather

References

- 1.Nyrhi L, *et al.* Spine J. 2023.
- 2.Bauchat JR, *et al.* Anesth Analg. 2012.
- 3.Michaen N, *et al.* J Matern Fetal Neonatal Med. 2016.

4. Waters JH, *et al.* Anesth Analg. 1993.
- 5.Khazim R, *et al.* Eur Spine J. 2015.