

BACKGROUND

- Pneumocephalus: rare but serious complication of epidural anesthesia, potentially leading to severe neurological consequences.
- It may present with acute headache, cranial nerve deficits, seizures, or altered mental status and may progress to brain herniation, brainstem compression, or persistent neurological deficits

METHODS

- This case report describes a post-epidural pneumocephalus, with informed patient consent obtained and exemption from Institutional Review Board review per Hospital Israelita Albert Einstein policy.

RESULTS

- Patient: 66-year-old female, ASA II
- Surgery: Elective exploratory laparotomy for an ovarian mass
- General anesthesia and Epidural blockade
- Epidural block at T12-L1 + catheter secured at 13cm = test dose of 3mL of 1.5% lidocaine with epinephrine.
- Intraoperatively: bolus of 5mL of 0.18% ropivacaine via catheter + continuous infusion of 2 mL.h-1 for 3 hours.
- Patient was transferred to ICU and started on patient-controlled epidural analgesia (PCEA) with ropivacaine 0.2% and fentanyl 2µg/mL at 3mL/h.
- No intravenous PCA was used, and the patient did not activate optional bolus doses.

Patient: 66y female, ASA II

**EPIDURAL
PLACEMENT**

SURGICAL PROCEDURE
DISCHARGED TO ICU

10H AFTER:

5-MINUTE SEIZURE

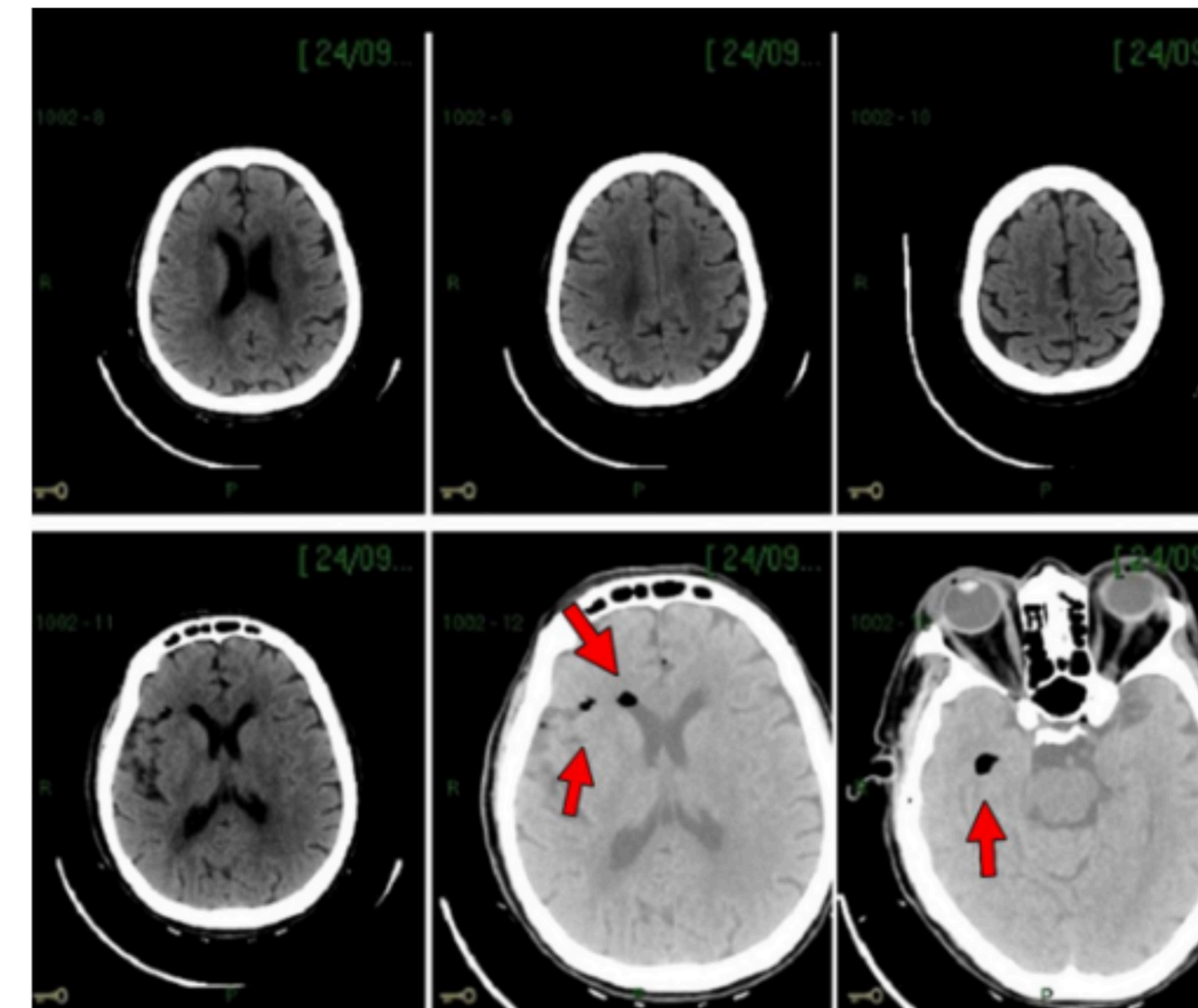


Fig. 1 - Head CT showing multiple foci of **Pneumocephalus**.

This case highlights that pneumocephalus can occur even in an uneventful epidural procedure.

- 10h after ICU admission = 5' convulsion + aphasia + fever.
- Cranial CT = pneumocephalus with scattered gas foci in the lateral ventricles, spinal canal, and paravertebral musculature.
- PCEA was discontinued after surgery
- The patient recovered spontaneously without neurological sequelae.
- Discharged from the ICU 3 days later.

DISCUSSION

- Pneumocephalus after an epidural is rare (<1%) and typically results from inadvertent dural puncture with air injection, though it can also originate from air outside the dura mater.
- Symptoms include headache, seizures, and transient neurological deficits, often resolving without intervention. Diagnosis is confirmed via imaging.
- Preventive strategies include minimizing air use during loss-of-resistance and preferring saline when feasible. Close post-procedural monitoring is crucial, as symptoms may present with delay.

