

Increased ICP in the Parturient with Alport Syndrome

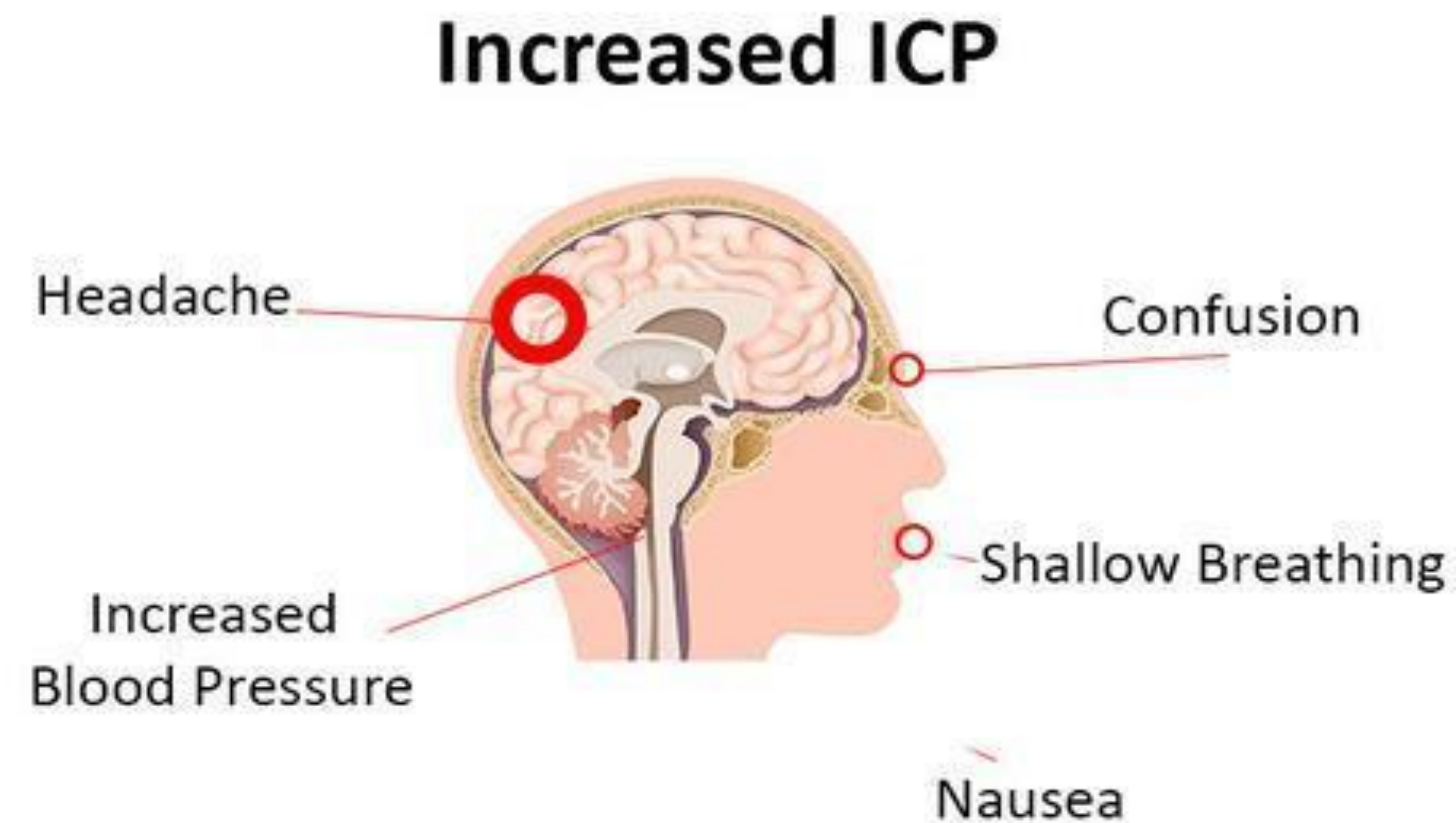
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Background



Elevated Intracranial Pressure (ICP), pressure $>20\text{mmHg}$, is pathological in pregnancy

Intracranial pathology requires careful consideration as peripartum pathology, labor, neuraxial, and GETA can acutely increase ICP

Maintenance of cerebral perfusion, oxygenation, and prevention of cerebral herniation are key management goals

Case Details



- 27yo G7P2 at 30w1d with hx of c/s x 1, anemia, cHTN, Alport Syndrome, CKD3, and elevated ICP and papilledema
 - Suspected idiopathic and empty sella syndrome as pt unrelieved by at least 2 LPs
- Pt presented with worsening renal function (GFR 21 from 80 pre-pregnancy) for surgical optimization and BMZ for fetal lung maturity
- Multidisciplinary discussion occurred between nephrology, MFM, OB anesthesia, neurology, cardiology, and NICU for delivery planning
- Ultimately neuraxial deemed unsafe; emergent HD delayed until after delivery; Elected for GETA with pre-op Arterial line, 2 large bore IV's, transfused 2u pRBC's to Hgb 8; Induction agents were propofol and rocuronium
- BP management carefully done to balance organ perfusion; esmolol 10mg and labetalol 20mg given with SBP < 160 accepted; A TAP block was done prior to extubation for pain control and smooth emergence
- ICU post-op. QBL was 1290mL, 1100 mL IVF given, and UOP was 80mL during the procedure and 180mL overnight. She was stepped down to the floor POD2 with euvolemia, resolved headache, and stable BP. Pt was discharged on POD5 requiring HD at 2mos post-op

Discussion

- Elevated ICP requires significant consideration in pts w co-morbidities
- Typically, in patients with IIH dural puncture would be therapeutic which is inconsistent with our case
- Pre-E contributes to ICP elevation and further complicated our management
- These findings required use of GETA to reduce herniation risk.
- GETA can be a safe option for patients who benefit from urgent delivery with hopes to definitively decrease ICP, though careful planning should be performed considering airway assessment profile, induction needs, maintenance of anesthesia, and extubation.

References

1. Warrick C, et al. 2025
2. Kilgore KP et al. 2017
3. Delaney AG. 1983