

Through the Anaesthetic lens: Managing challenges in a parturient with Empty Sella Syndrome and Idiopathic Intracranial Hypertension.

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INTRODUCTION:

- The pituitary gland located at the base of the brain within the sella turcica, regulates endocrine function
- **Empty Sella Syndrome (ESS):** Rare condition with absent or compressed pituitary gland. ^{1,2}

PRIMARY: Defect in the diaphragma sella

SECONDARY: Due to space-occupying lesions, surgery, or ↑ ICP

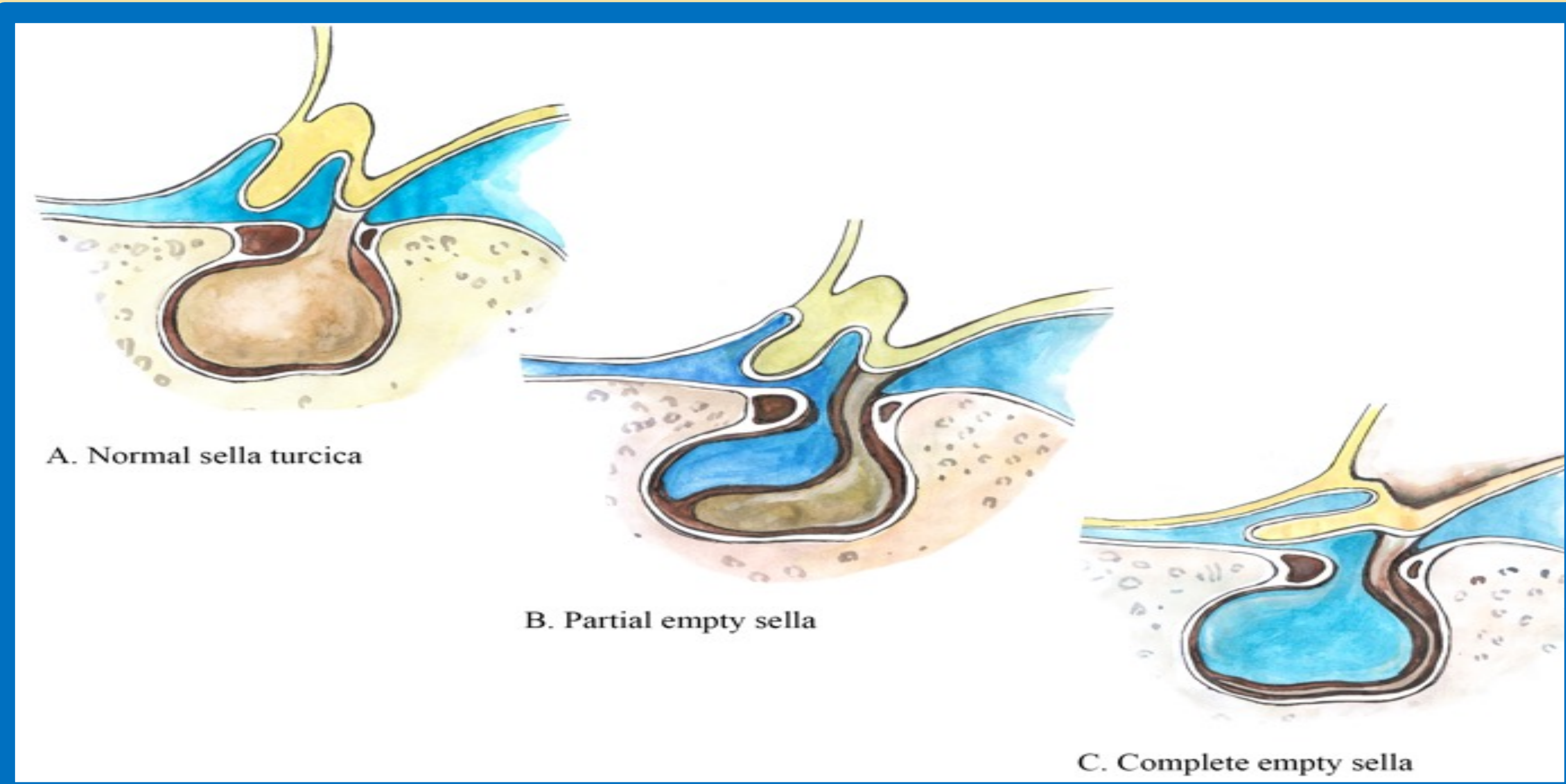
- **Idiopathic Intracranial Hypertension (IIH):** Rare condition with ↑ ICP without apparent pathology.

CHALLENGES

Rarity of ESS and IIH during pregnancy.

Scarcity of information and the diagnostic complexities

Multidisciplinary approach and recognizing potential complications.



CASE REPORT:

Patient Details:

- 36-year-old primipara (BMI 32) with dual diagnosis of IIH and ESS.
- Scheduled for elective caesarean section under spinal anaesthesia at 36+6 weeks.
- Medical History: Chronic headaches, hypertension, visual disturbances.
- Pregnancy exacerbated her symptoms, necessitating a multidisciplinary intervention.
- The overlap of symptoms with pregnancy-induced hypertension, pre-eclampsia, and post dural puncture headache complicated the diagnosis.
- Managed with acetazolamide (teratogenic before 20 weeks), antihypertensives and analgesics

Preoperative Evaluation:

- Blood tests, endocrine workup: Normal
- Neurological and systemic examinations: Normal
- MRI: No signs of raised ICP
- Regular neurological and ophthalmic reviews: No papilloedema, opening pressure = 27cmH₂O & normal CSF composition on LP
- Risks and benefits of various anaesthesia options explained to the patient.

Anaesthetic Considerations:

- Choice of anaesthesia: While dural puncture is contraindicated in patients with ↑ ICP due to SOLs to avoid coning, evidence supports spinal anaesthesia safety in IIH.
 - CSF drainage helps prevent herniation by maintaining uniform brain swelling, making RA preferable over GA, which could elevate ICP. ³
- Avoid increase in ICP during labour pains and uterine contractions:
 - Adequate analgesia, shortening 2nd stage of labour, slow epidural injections to reduce transmission of pressure to subarachnoid space.
- Postpartum pituitary necrosis following severe haemorrhage and hypotension may worsen ESS
- Monitoring BP, IV fluids and titrating phenylephrine along with availability of vasopressin in-case of hypotension due to posterior pituitary insufficiency exacerbated by surgical stress.⁴
- Adequate postoperative analgesia.

Outcome and Follow-Up:

- Successful delivery of a healthy baby.
- Normal postoperative investigations.
- Continued acetazolamide and regular follow-ups.

DISCUSSION:

- ESS, often discovered incidentally, requires attention to both anterior and posterior pituitary functions.
- The stress from surgery or anaesthesia may unmask pituitary insufficiency, emphasizing the importance of early diagnosis and hormonal replacement.
- The patient's complex history involved secondary ESS possibly caused by persistently ↑ ICP due to IIH.
- The successful maternal and foetal outcome in this case underscores the significance of a multidisciplinary team (obstetric, anaesthetic, neurology and ophthalmology), early diagnosis, and individualized anaesthetic management.

LEARNING POINTS:

Comprehensive perioperative planning, thorough pre-op optimization and multidisciplinary team collaboration.

Early establishment of an anaesthesia plan, coupled with active patient involvement, contributed to a positive patient experience.

Perioperative Vigilance: Anticipating and mitigating perioperative pitfalls.

Individualized Care tailored to unique patient profiles.

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