

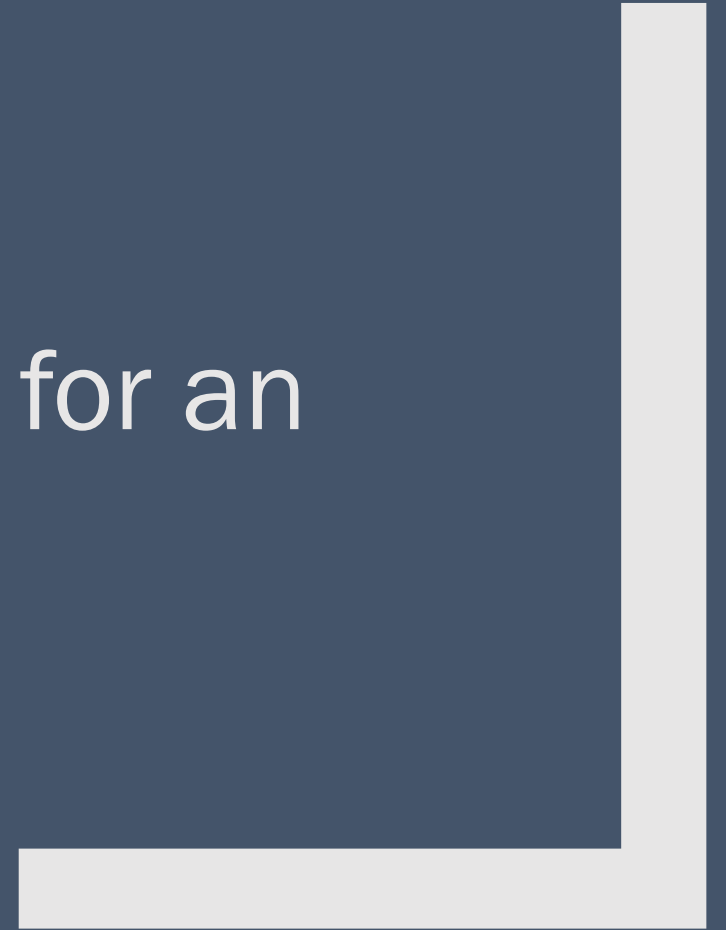


# CASE 8

Group C



A 24 years female patient  
39 weeks pregnant was booked for an  
Elective Cesarean



# The physiological changes in pregnancy and their anesthesia consideration

- Cardiovascular system: ↑ cardiac output, risk of aortocaval compression
- Airway: difficult tracheal intubation (e.g. upper airway edema)
- Respiratory system: ↓ functional residual capacity, risk of hypoxia
- Blood: dilutional anemia, hypercoagulable state
- GI system: risk of esophageal reflux

# The benefits of regional anesthesia over GA for this case

- Avoidance of the risks of GA – failed intubation, aspiration of stomach contents, neonatal depression and awareness under GA;
- Good analgesia immediately postoperatively;
- Possible reduction in blood loss and pulmonary thromboembolism; • usually a positive experience for both mother and partner.

Regional anaesthesia is preferred to general anaesthesia as it is safer for the mother and the baby compared to GA.

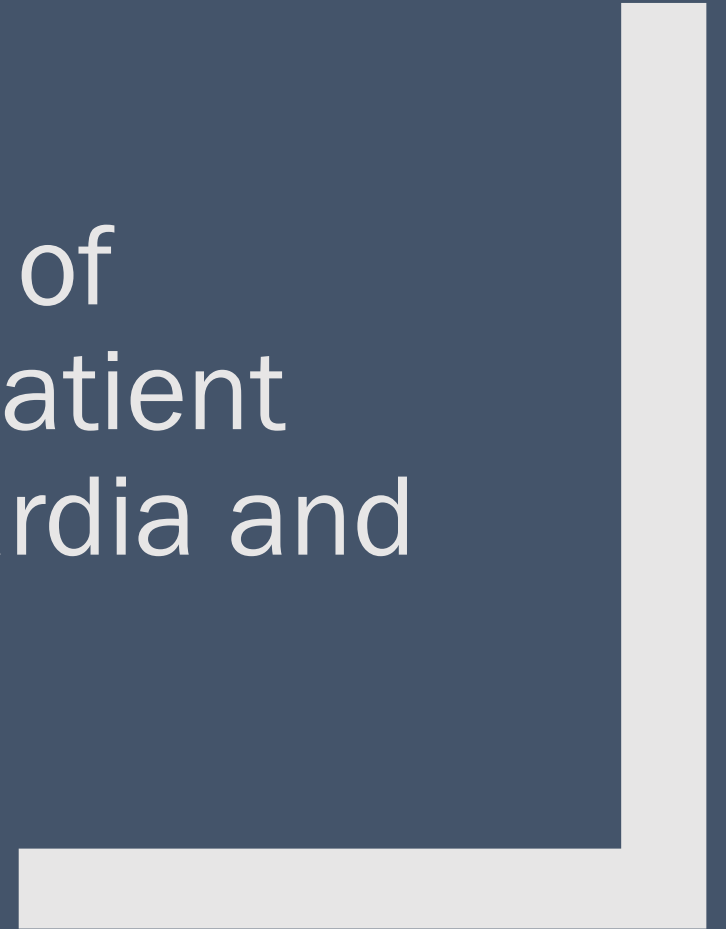
# The absolute contraindication of regional anesthesia

- Patient refusal
- Infection at the Injection site
- An allergy to local anesthetics
- The inability to guarantee sterile equipment to perform the block
- Coagulopathy (acquired, induced, genetic)
- Severe hypovolemia
- Increased intra-cranial pressure
- Severe aortic or mitral stenosis
- Ischemic hypertrophic sub-aortic stenosis
- Severe uncorrected anemia

# Relative contraindications

- Sepsis (may spread infection to subarachnoid/epidural space)
- Uncooperative patient (dementia, psychosis, emotional instability)
- Preexisting neurological deficits (hard to differentiate natural progression versus neurological trauma related to neuraxial blockade)
- Demyelinating lesions
- Stenotic valvular heart lesions
- Severe spinal deformity

After giving an intrathecal dose of bupivacaine and fentanyl, the patient vomited and developed tachycardia and hypotension



# The cause of hypotension

- Due to sympathetic block which causes peripheral vasodilation.



# The management

- IV fluids: for increasing available vascular volume.
- Ephedrine: for raising heartbeat rate, cardiac output and peripheral vascular resistance.
- Alpha 1 agonists (phenylephrine): increasing peripheral vascular resistance.
- Mechanical compression of the lower limbs: for increasing venous return.

# The difference between spinal and epidural anesthesia?

Epidural	Spinal (intrathecal)
<ul style="list-style-type: none"><li>▪ Catheter inserted therefore can be topped up</li><li>▪ Slow onset</li><li>▪ Large needle</li><li>▪ For labour analgesia/LSCS/instrumental</li><li>▪ May get missed segments</li></ul>	<ul style="list-style-type: none"><li>▪ 'Single shot' into CSF (so cannot be topped up)</li><li>▪ Rapid onset</li><li>▪ Small needle</li><li>▪ LSCS/instrumental/retained placenta</li><li>▪ Missed segments rare</li></ul>

# The complications of regional anesthesia?

- Hypotension: from sympathetic block.
- Nausea and vomiting.
- Weakness.
- Urinary retention.
- Headache: from accidental dural puncture.
- Catheter misplacement: may cause total spinal anaesthesia with total paralysis, loss of consciousness, and cardiac arrhythmias. Can affect upper limb power and respiration (C3–5).
- Neurological damage: because of direct trauma, injecting the wrong substance or due to a space-occupying lesion in the vertebral canal compressing the spinal cord.
- Duration of labour may be increased.

## How you see the world before the epidural



## How you see the world after the epidural



THANK YOU!

