

# Spinal anaesthesia for cesarean section in obese parturient with surgically corrected scoliosis- The challenges and options.

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## Background

- Neuraxial anaesthesia after surgical correction of scoliosis is technically challenging :
  - difficulty in positioning .
  - posterior spine fusion and cutaneous scar makes entering to the space difficult.
- For Epidural Anaesthesia:
  - loss of resistance will be absent due to the surgical disruption of ligamentum flavum.
  - Adhesions and scarring in the epidural space may affect LA spread and efficacy.
  - Catheter misplacement /unintentional subdural catheter placement or dural puncture may occur.
- But SA should be considered in obese parturients owing to the complications associated with GA.

## Case description

- 24 yr, G2P0, BMI 40 (161cm,102kg), for elective LSCS.
- h/o surgically corrected idiopathic thoracolumbar scoliosis from T1-L4 in childhood.
- Consented for SA in the clinic.
- Explained to her: - high failure rate of SA in surgically corrected scoliosis
  - incomplete block/ patchy block.
  - the possibility of conversion to GA.
- SA given in sitting position in L5-S1 space under ultrasound guidance.
  - 2.6 ml of 0.5% hyperbaric Bupivacaine with 10 mcg Fentanyl.
- Sensory level at 3 mts using Ethyl chloride spray was T8.
- On Trendelenburg position, level ascended to T6 on left side.
- Level remained at T8 on right side, motor block still inadequate.
- Converted to GA - RSI, intubation using C Mac.
- Intra and postoperative periods were uneventful.

## Discussion and teaching points

- Neuraxial anaesthesia is generally avoided in corrected scoliosis:
  - technical difficulty and incomplete block.
- But the recent surgical techniques:
  - spare the lower lumbar segments.
  - implants placed laterally outside the spinal canal.
- Ultrasound guidance facilitates the identification of spaces.
- SA has been successfully given for C sections in parturients with prior spinal instrumentation.( Kardash et al <https://pubmed.ncbi.nlm.nih.gov/8403141/>)
- Continuous SA using intrathecal catheters:
  - avoid the complication of patchy block .
  - possibility of accidental overdose, infection and PDPH .
  - ( okutomi et al <https://pubmed.ncbi.nlm.nih.gov/8403141/>)
- CSE is an effective option as we can top up the epidural, if adequate block is not achieved with intrathecal dose as in our case.(Silva et al <https://pubmed.ncbi.nlm.nih.gov/8403141/>)
- Explanation to the patient regarding the need for conversion to GA is mandatory .