Anesthetic Management for Cesarean Delivery in Suspected Uncharacterized Spinal Dysraphism

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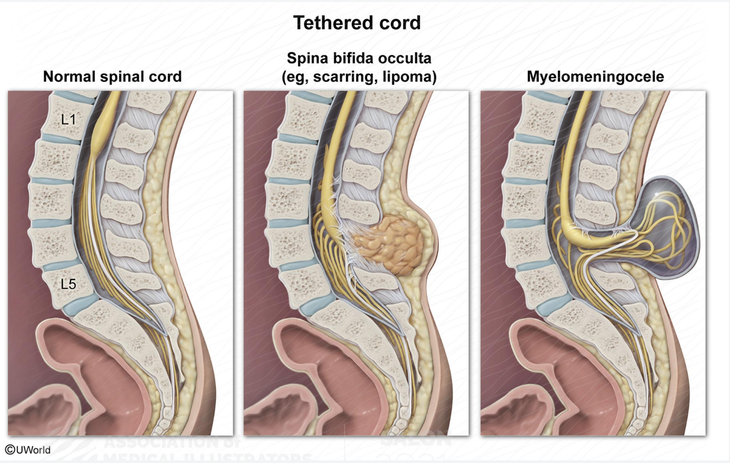
Background

- Spina bifida is a congenital spinal dysraphism that may result in altered vertebral and spinal cord anatomy.
- Spinal anatomic abnormalities can complicate neuraxial anesthesia during cesarean delivery
- Neuraxial anesthesia has been successfully performed in patients with spina bifida, however management should be individualized based on clinical presentation and spinal anatomy evaluation
- This case highlights anesthetic decision making in a parturient with suspected but uncharacterized spinal dysraphism despite a history of previous successful spinal anesthesia

The Case

- 28 –Year-old woman presented for elective cesarean delivery
- Reported a history of spina bifida, diagnosed incidentally by a physician abroad
- Type and extent of spina bifida unknown
- Reported two previous uncomplicated spinal anesthetics for prior cesarean delivery and cholecystectomy
- No prior treatment or history of neurologic symptoms or deficits
- Prior spinal imaging and operative records were unavailable
- History of spina bifida identified on the day of surgery, without prior anesthesia or neurology consultation
- Physical examination revealed a prominent lumbosacral hair tuft, raising concern for spinal dysraphism and a possible tethered cord





Discussion

- Prior successful spinal anesthesia does not establish normal spinal anatomy
- In this patient, a lumbosacral hair tuft raised concern for underlying dysraphism despite the absence of neurologic symptoms and two prior uncomplicated spinal anesthetics
- Because a low lying or tethered cord could not be excluded, a safe lumbar insertion could not be confidently identified

Anesthetic Considerations

- Neuraxial anesthesia in patients with suspected spinal dysraphism requires consideration of vertebral anatomy, spinal cord position, neurologic findings, and available imaging
- Previous successful neuraxial anesthesia should not provide false reassurance when current findings suggest abnormal spinal anatomy
- Physical examination may identify cutaneous findings suggestive of underlying dysraphism and should be incorporated into an individualized anesthetic plan

Future Directions and Follow Up

- Early prenatal anesthesia consultation should be considered in patients with known or suspected spinal dysraphism
- Earlier evaluation may allow time to obtain prior records and characterize spinal anatomy before delivery
- When indicated, further evaluation of spinal anatomy may help determine whether spinal anesthesia can be safely attempted and assist with procedure planning

References