

IT ALL COMES BACK TO ANATOMY – IS THE OPTIMAL LEVEL FOR NEURAXIAL ANESTHESIA DIFFERENT IN THE ACHONDROPLASTIC PARTURIENT?

Annastacia Woytash DO, Pauline Ripchik MD, Laura Sorabella MD, Ashley Lewis MD

A TALE OF TWO DELIVERIES

37-year-old G2P0 at 37.1 gestation with achondroplasia presented for primary cesarean delivery

119.4 cm, 58.9 kg, BMI 41.3

Anesthetic technique:

4 attempts at CSE with loss of resistance but inability to obtain CSF, epidural catheter placed at L1-2 interspace

Uneventful delivery and postoperative course



29-year-old G1P0 at 38.5 gestation with achondroplasia presented for primary cesarean delivery

113.7 cm, 61.6 kg, BMI 47.6

Anesthetic technique:

Combined spinal epidural at L1-2 in the seated position with landmark technique in 1 attempt

Uneventful delivery and postoperative course

IT ALL COMES BACK TO ANATOMY – IS THE OPTIMAL LEVEL FOR NEURAXIAL ANESTHESIA DIFFERENT IN THE ACHONDROPLASTIC PARTURIENT?

Annastacia Woytash DO, Pauline Ripchik MD, Laura Sorabella MD, Ashley Lewis MD

Antenatal considerations

- Limited abdominal compartment
- Cephalopelvic disproportion
- Kyphoscoliosis & cardiopulmonary complications

Higher likelihood of preterm and cesarean delivery

Anesthetic considerations

- Difficult airway management
- Difficult neuraxial anesthesia
- Altered local anesthetic dosing

Failed or deferred neuraxial procedures leading to cesarean delivery under general anesthesia

IT ALL COMES BACK TO ANATOMY – IS THE OPTIMAL LEVEL FOR NEURAXIAL ANESTHESIA DIFFERENT IN THE ACHONDROPLASTIC PARTURIENT?

Annastacia Woytash DO, Pauline Ripchik MD, Laura Sorabella MD, Ashley Lewis MD

SPINE ANATOMY IN ACHONDROPLASIA BASED ON MRI IMAGING STUDIES

Dysplastic spinal column

Shorter lumbar spine

Thoracolumbar
junction kyphosis

Altered epidural space

Folding of ligamentum
flavum

Reduced lumbar spine
canal width

Vertebral body anomalies

Decreased vertebral
body height

Wedging of vertebral
bodies

Higher level of
spinal cord
termination on
average at T12

Our hypothesis: neuraxial techniques performed in the upper lumbar or low thoracic spine are safe and proceduralists are more likely to obtain free flowing CSF, easily thread an epidural catheter, and achieve adequate local anesthetic spread for operative delivery

References

