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Epidural Labor Analgesia in a Parturient With Neurofibromatosis Type 1

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Background

Neurofibromatosis Type 1 (NF1) is an Autosomal dominant disorder with clinical features of Café-au-lait macules, Neurofibromas, and Possible CNS involvement

Anesthetic Considerations

Concern for:

- Occult spinal neurofibromas
- Increased risk during neuraxial placement

Potential complications:

- Difficult catheter placement
- Neurologic injury

Current Recommendations

- No routine spinal imaging in asymptomatic patients

- Neuraxial anesthesia is acceptable if:
  - No focal neurological deficits
  - No symptoms suggesting spinal involvement

Case

25-year-old G2P1001 at 37+0 weeks presents for induction due to GHTN with History of NF1 (café-au-lait macules, prior peripheral neurofibroma excision). Patient has no neurological deficits or spinal involvement

Pre-procedure Evaluation

Neurology consultation obtained
Bedside exam: no contraindications to neuraxial anesthesia
No MRI obtained

Anesthetic Management

Combined spinal–epidural (DPE technique) at lumbar level
Epidural analgesia:

- 0.0625% bupivacaine + fentanyl 2 mcg/mL
- PIEB + PCEA (9 mL q45 min; 5 mL bolus, 10-min lockout)

Outcome

Uncomplicated vaginal delivery
No maternal or neonatal complications
Normal ambulation and voiding postpartum

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Key Points

1. Neuraxial Anesthesia is Not Contraindicated in NF1
Safe in asymptomatic patients
Routine MRI not required

2. Pre-procedural Assessment is Critical
Detailed history
Focused neurological exam
Consider neurology consult for reassurance

3. Understand the Real Risk
Concern: spinal neurofibromas
True risk is low without neurologic symptoms