Anesthetic management of the morbidly obese, anticoagulated parturient with a spinal cord stimulator

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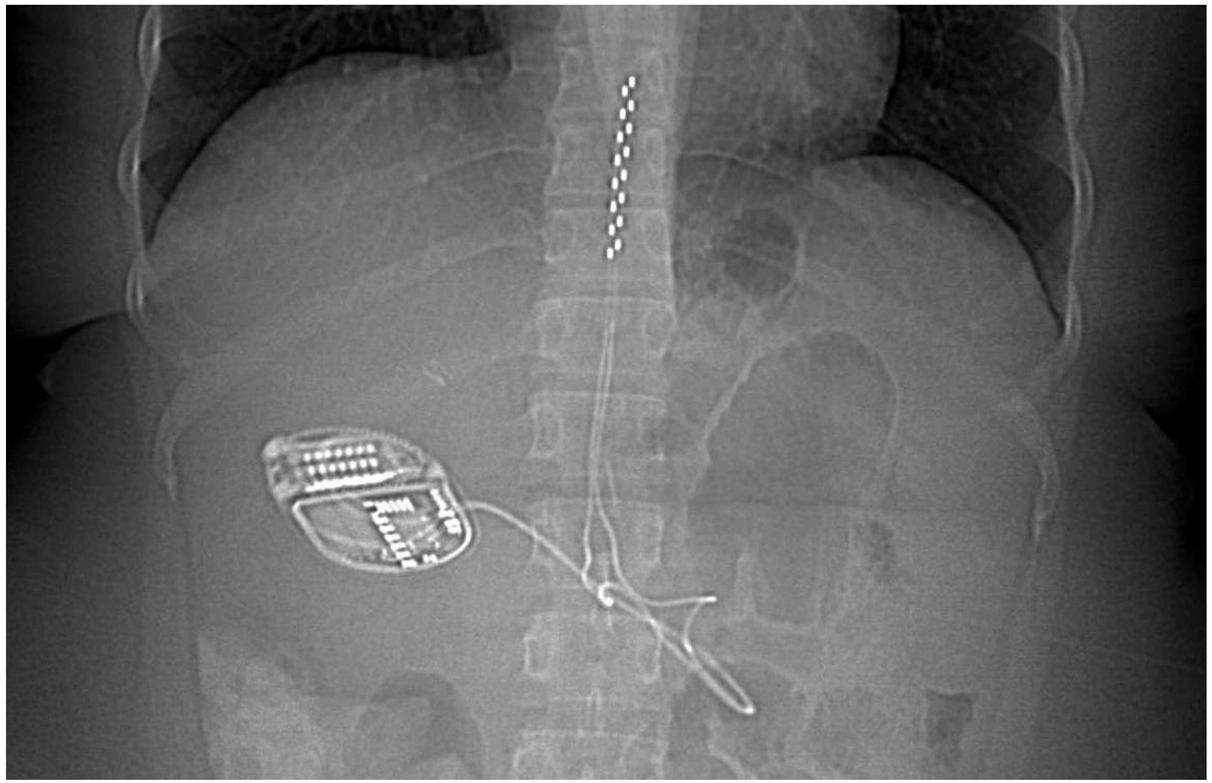
Spinal cord stimulators (SCSs)

- Treat refractory chronic neuropathic pain
  - Uses electricity to modulate pain

SCS Components:

- Epidural wires
  - Deliver electrical current to neurons
- Internal pulse generator (IPG)
  - Typically subcutaneously in flank or buttock
- Increasing usage in women of childbearing age
- Neuraxial techniques and SCS may share the epidural space



Case Presentation

29F at 33 weeks and 4 days of second pregnancy

- Morbid obesity
- Prior PE on 10,000U subq heparin BID
- Severe IUGR and intermittent absent end-diastolic flow
- Non-reactive stress test

Presented for urgent cesarean section

SCS placed 1 year ago for a back injury from an MVA

- Wires entering epidural space at L1-2; IPG placed in right flank

Received single shot spinal anesthetic at L3-4 and delivered uneventfully

- Discharged home on POD4, baby discharged home 1 month later.

Neuraxial anesthetics

NOT contraindicated with a SCS

Special considerations:

- Attempt neuraxial above or below the level of SCS wires
- Obtain imaging / records prior to delivery to identify the location of the epidural leads and IPG
- Risk of incomplete epidural anesthesia
  - A fibrous encapsulated sheath forms around the epidural wires
- Strict sterile technique to avoid infection of SCS hardware

Consider SCS deactivation during pregnancy / labor

Caesarean section

Minimize electrocautery

- thermal injury to the patient
- loss of function of the SCS

IF necessary, bipolar is preferred over monopolar

- If monopolar is necessary:
- Evaluate SCS beforehand:
  - Ensure normal impedance
  - Reprogram to lowest setting
  - Turn it off
  - Grounding pad far away from the SCS and IPG

Postoperatively, interrogate of SCS to ensure normal function and then reprogram