

## BACKGROUND

### Spinal muscular atrophy (SMA)

- Defect in the survival motor neuron-1 (SMN-1) gene
- Variable phenotypes
- Improvements in treatment → more women reaching child-bearing age

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### Pregnancy and SMA

- Increased risks of pre-term labor
- Worsening of baseline respiratory weakness
- Scoliosis & difficult with neuraxial placement<sup>2</sup>

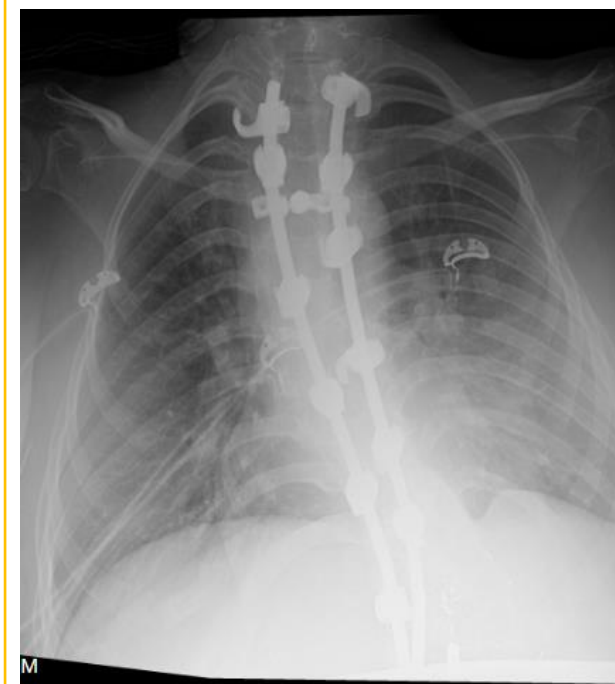
### SMA Subtypes

- I. Infantile onset, respiratory distress, inability to sit upright
- II. 6-10mo onset, wheelchair-bound
- III. 18m-adulthood onset, independently mobile
- IV. Late-onset after age 30, maintain their mobility<sup>1</sup>

## CASE REPORT

### Presentation

- 35 year-old female G3P1102 at 37w0d with SMA type II
- Wheelchair-dependence
- Scoliosis s/p thoracolumbar spinal fusion
- Restrictive lung disease/BiPAP
- Obstetric hx: 2 prior cesarian deliveries under GA with LMA
- Physical exam: Mallampati 4, reduced oral opening & thyromental distance, reduced cervical motion, severe limb contractures



### Intraop

- Plan: Cesarean delivery general TIVA with ETT
- Induction: propofol 200mg, fentanyl 25mcg, lidocaine 50mg, propofol infusion
- Intubation: RSI with video laryngoscope grade IIb view 6.5 ETT
- Ventilation: Controlled → PSV → manual with TV ~245mL → extubation
- Pain management: TAP blocks, hydromorphone 1.0mg IV, ketorolac 15mg IV

### Postop

- POD 0:
  - Immediate hemorrhage
  - 300cc clot in vaginal canal (atony)
  - Rectal misoprostol 800mcg, methergine 0.2mg IM
- POD 1:
  - H/H 11.2/35 → 6.6/21
  - 1U pRBC and iron
  - Persistent bleed → methergine & TXA
  - Pain control: MMPR insufficient → PCA pump
- POD 3:
  - Discharged home

## LEARNING POINTS

### Risks of Vaginal Delivery

- Abdominal muscle weakness (limits pushing)
- Prolonged immobility → reduction in pelvic diameter
- Neuraxial feasibility

### Risks of Cesarean Delivery (Spinal)

- Reductions in FEV1 and VC after spinal placement
- Scoliosis (difficult/impossible placement)

### Risks of Cesarean Delivery (General)

- Aspiration risk, difficult airway
- Respiratory muscular weakness and increased difficulty to wean from mechanical ventilation
- Avoid paralysis
- ETT vs. LMA: weigh aspiration risk

## References

1.



2.

