

# General vs. Neuraxial Anesthesia for Cesarean Section in a Patient with Alpha-1 Antitrypsin Deficiency

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## BACKGROUND

- **Alpha-1 antitrypsin** is a protein produced in the **liver**; when deficient it can misfold, build up, and produce **cirrhosis**
- Cirrhosis can cause **thrombocytopenia** and subsequent **bleeding diathesis**
- In cirrhotic patients undergoing **neuraxial anesthesia**, predisposition to bleeding increases the risk of **epidural hematoma** and its sequelae

- 26 year old G5P0221 at 31w4d
- A1ATD (w/o pulm involvement) complicated by
  - Cirrhosis
  - Portal HTN
  - Splenomegaly
  - Periumbilical & esophageal varices
  - Thrombocytopenia
- Presented for PPROM in 02/2024
- Undergone CS 05/2021 with CSE w/o complication

- Underwent rCS 02/2024 with transplant surgery on standby in the OR to assist
- GETA with 2 PIV and radial arterial line
- Intraop course uncomplicated
- EBL 1030 mL
- 1 unit each of PRBC, cryoprecipitate, platelets transfused prophylactically
- Extubated in OR → SICU → floor: no evidence of decompensation during recovery

- **February 2024 (rCS):** PLT 71; Hgb 9.8; AST 89; ALT 34; Cr 0.69; Tbili 4.1; INR 1.4; Na<sup>+</sup> 136; MELD score 17
- **May 2021 (PCS):** PLT 92; Hgb 9.8; AST 44; ALT 22; Cr 0.35; Tbili 1.1; INR 1.2; Na<sup>+</sup> 135; MELD score 9
- Worsening PLT and MELD score during for rCS

## DISCUSSION

- Risk of EH in NA must be weighed against the risk of increased blood loss in GA
- Decision for NA in pCS was reasonable given evidence supporting PLT 70,000-100,000 mm<sup>3</sup> have 0.2% risk of EH
- Decision for GA in the rCS was also justified given worsening of liver disease, coagulopathy, thrombocytopenia, and anticipated possible complexity of the surgery