

Considerations for Surgery in Cirrhotic Patients with Subacute Hepatic Decompensation During Pregnancy

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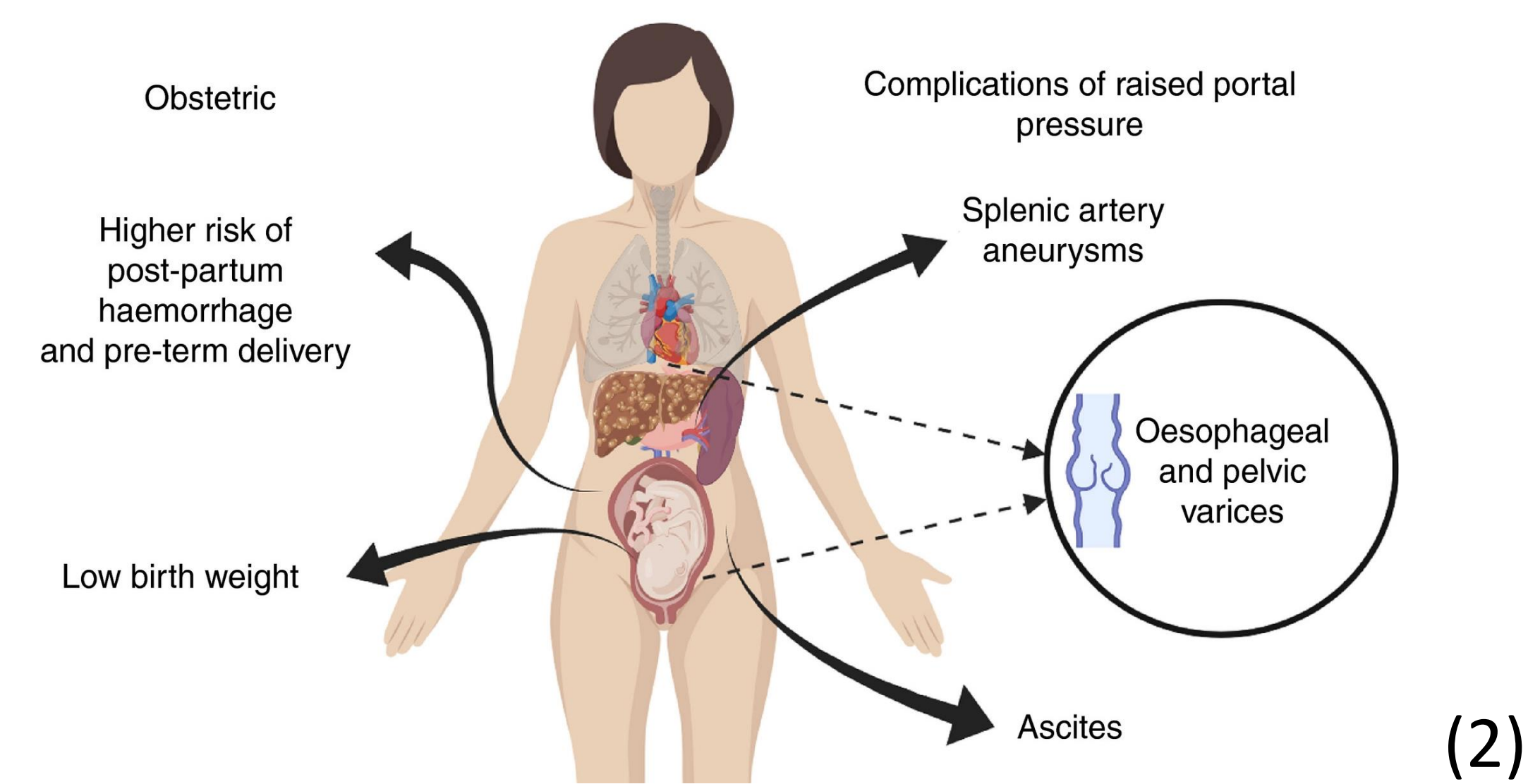
Introduction

- Patients with non-pregnancy-specific liver disease have an increased risk of worsening liver function during pregnancy, affecting viability of both mother and baby. The incidence is rare, comprising 0.01% of pregnancies (1).
- We present a rare case of a post-orthotopic-liver-transplant (OLT) parturient who required an urgent cesarean delivery due to subacute worsening of hepatic dysfunction.

Case Report

- 28-year-old G1P0 female with history of autoimmune hepatitis status post OLT complicated by recurrent cirrhosis
- Admitted at 30.5 weeks' gestation for worsening abdominal distension, leg edema, and shortness of breath with exertion
- Developed portal hypertension complicated by non-bleeding esophageal varices, hepatic hydrothorax, and massive splenomegaly. Her symptoms persisted despite aggressive diuretic therapy.
- Due to concern for decompensated cirrhosis with a MELD score of 23, she was scheduled for cesarean delivery at 31 weeks' gestation.

Obstetric Complications with Chronic Liver Disease



Case Report (continued)

- Significant preoperative laboratory data included: platelets 32 K/mcL, Hgb 9.3 g/dL, INR 1.7, and fibrinogen 122 mg/dL
- Prior to induction, a 7 Fr rapid-infusion catheter, 16G peripheral IV, and arterial lines were placed with cell salvage available. She also received 2 units of platelets, 2 units of fresh frozen plasma and 1 unit of cryoprecipitate prior to induction to counteract her coagulopathy.
- She underwent an uneventful standard general anesthetic with an estimated 500 mL blood loss and 2.5L ascitic fluid loss. She did not require additional blood product administration.
- Her postoperative course was uncomplicated with improved liver function studies and MELD score prior to discharge. She continues to be active on the liver transplant list.

Discussion

- Although most liver transplant patients deliver via cesarean, it should be reserved for obstetric indications
- Special anesthetic considerations during the peripartum period include:
 - Variceal hemorrhage from increasing portal hypertension with constant valsalva maneuvers (3) during the 2nd stage of labor
 - Hypotension from severe hemorrhage due to coagulopathy and pelvic varices
 - Aspiration from elevated intra-abdominal pressure secondary to ascitic fluid buildup
 - Fetal hypoxia and demise from transient hypotension with massive hemorrhage
 - Elevated risk of spinal-epidural hematoma due to significant coagulopathy
- Care must be taken to plan for massive bleeding in pregnant patients with large collateral circulation and known coagulopathy secondary to pre-existing liver disease. Preparations include pre-emptive planning for assisted-vaginal delivery or the possibility of emergent liver transplantation.

References

1. Flemming et al. *Gastroenterology* 2020; 159 (5):1752-1762.
2. Faulkes et al. *Alimentary Pharmacology & Therapeutics* 2020; 52(3):420-429.
3. Rahim et al. *United European Gastroenterol J.* 2021;9(1):110-119.