Albany Medical Center

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Anesthetic Management of a Morbidly Obese Parturient Requiring Preterm Delivery due to Severe-Range Hypertension

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Background

- Severe-range hypertension in pregnancy is associated with significant maternal and fetal morbidity and may require urgent delivery
- Anesthetic management can be further complicated in patients with morbid obesity and hemodynamic instability
- Careful multidisciplinary planning is essential to minimize maternal risk and optimize outcomes

Case Description

A G3P2002 woman at 28 weeks and 4 days' gestation transferred from another hospital for severe-range blood pressures, with systolic values exceeding 200 mmHg. She reported a history of gestational hypertension and pre-eclampsia in prior pregnancies but denied chronic hypertension or antihypertensive use outside of pregnancy.

She was admitted to the medical intensive care unit (ICU) and required a nicardipine infusion with intravenous boluses of labetalol and hydralazine. The patient was morbidly obese with a body mass index of 59. While in the ICU, she remained asymptomatic for pre-eclampsia, and blood pressures improved to the mild range on a nicardipine infusion. Given ongoing maternal risk, the obstetric team recommended delivery.

Management & Outcome

The anesthetic plan included:

- Arterial line placement for continuous blood pressure monitoring
- Bedside point-of-care ultrasound demonstrated good left ventricular contractility without obvious cardiac abnormalities
- A combined spinal–epidural technique was attempted at the L3–4 interspace using 1.8 mL of 0.75% hyperbaric bupivacaine, 15 mcg fentanyl, and 100 mcg morphine

Although intrathecal dosing was successful, the epidural catheter could not be threaded. This was communicated to the obstetric team, including the potential need for conversion to general anesthesia. The cesarean section was performed under a spinal.

Discussion/Conclusion/Teaching Points:

Severe hypertension in pregnancy is associated with increased maternal morbidity, including stroke, myocardial ischemia, pulmonary edema, and postpartum hemorrhage. Neuraxial anesthesia is generally preferred for cesarean delivery in hypertensive parturients, as it is associated with lower maternal morbidity compared with general anesthesia [3]

In this case, invasive arterial blood pressure monitoring allowed close hemodynamic control in a patient requiring intravenous antihypertensives.

- Although epidural catheter placement was unsuccessful, early communication and contingency planning was essential to ensure maternal safety.
- Bedside POCUS ultrasound can and should be used
- This case highlights the importance of individualized anesthetic planning,multidisciplinary coordination, and prioritization of neuraxial anesthesia when feasible to optimize maternal outcomes in high-risk obstetric patients [2]