Substance Abuse And Fulminant Withdrawal In A Pregnant Patient With Severe Pulmonary Hypertension

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Background:

- Rising Trend: Opioid-related diagnoses at delivery increased by 131% from 2010 to 2017.[1]
- Clinical Challenge: Patients with substance abuse often present late in pregnancy with multiple comorbidities and high anesthetic risk.
- High-Risk Comorbidity: Pulmonary hypertension in pregnancy is associated with a maternal mortality rate of 30–56%. [2]
- Anesthetic Implications: Requires a tailored, multidisciplinary approach to manage withdrawal, cardiovascular instability, and obstetric needs.

1. Hirai A. JAMA.. 2021;325(2):146-155
2. Weiss BM. J Am Coll Cardiol. 1998 Jun;31(7):1650-7.

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Patient

- 32-year-old G4P2 at 38 weeks with twin gestation
- History: IV drug use, infective endocarditis, chronic hepatitis C, absent prenatal care, chronic opioid use
- Symptoms: SOB, LE edema, severe pain, methadone use
- Diagnosis: Preeclampsia with superimposed severe pulmonary hypertension confirmed via echocardiogram complicated by opiate withdrawal.

Case

- **Preoperative:** Treated for agitation (ativan, methadone), given 1 unit PRBC for severe anemia
- **Monitoring:** 2 IVs and arterial line placed
- **Anesthesia:** Regional anesthesia chosen to avoid hemodynamic shifts from general anesthesia
- **Sedation:** Ketamine, propofol, dexmedetomidine, midazolam
- **Surgery:** Cesarean section performed with controlled blood loss and appropriate transfusion
- **Post-op:** ICU admission, dexmedetomidine for agitation, improved ECHO

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- **Multispecialty Coordination is Critical**: Involving cardiology, pulmonary, psychiatry and anesthesia teams ensured optimized care.
- **Regional Anesthesia Preferred:** Avoids precipitous changes in pulmonary vascular resistance associated with general anesthesia.[3]
- **Careful Use of Uterotonics:** Slow, low-dose oxytocin administration minimizes risk of pulmonary hypertensive crisis. [4]
- **Substance Use Management:** Addressing withdrawal symptoms intraoperatively (with methadone, benzodiazepines, and sedation) is vital for safety.
- **Tailored Monitoring and Resuscitation:** Close hemodynamic monitoring and proactive blood management essential in high-risk parturients.

3.. Martin SR. Obstet GYnecol. 2020 Apr; 135(4):978.
4. Wang J. J Cardiothorac Vasc Anesth. 2021;35(7):2201-2211