

A Multidisciplinary Approach to Cesarean Delivery in a Patient with Hypertrophic Cardiomyopathy and Amide Local Anesthetic Allergy

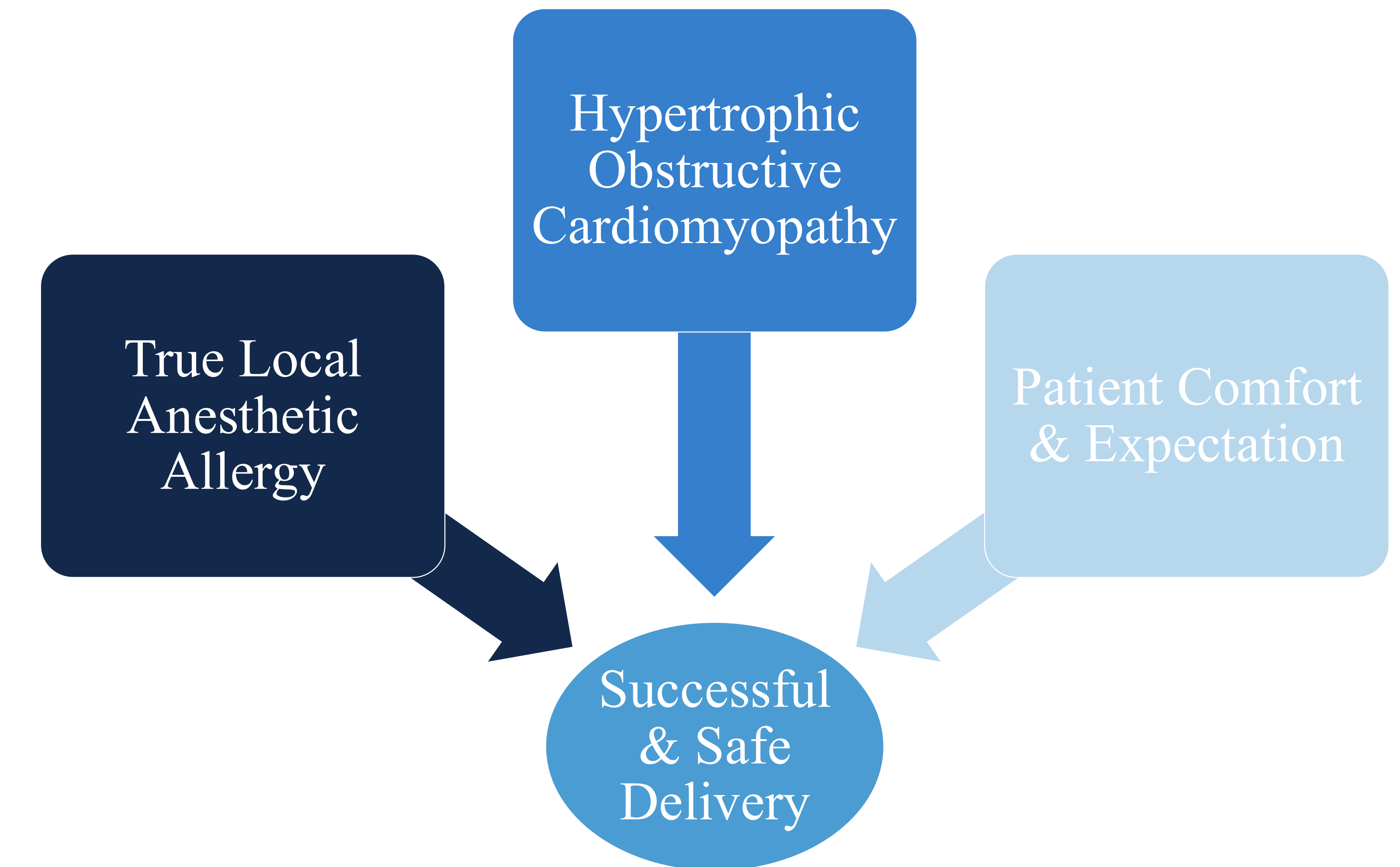
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Background

- Hypertrophic Obstructive Cardiomyopathy (HOCM) is a genetic cardiac condition marked by left ventricular hypertrophy and dynamic outflow tract obstruction.
 - Cardiovascular complications occur in up to ~25% of patients while obstetric complications typically include increased rate of pre-term delivery and small for gestational age infants.
- True local anesthetic allergy is exceedingly rare, <1% of all documented adverse reactions!
 - Importantly, there is no cross reactivity between ester and amide allergies, which provides options even in the face of true allergy.



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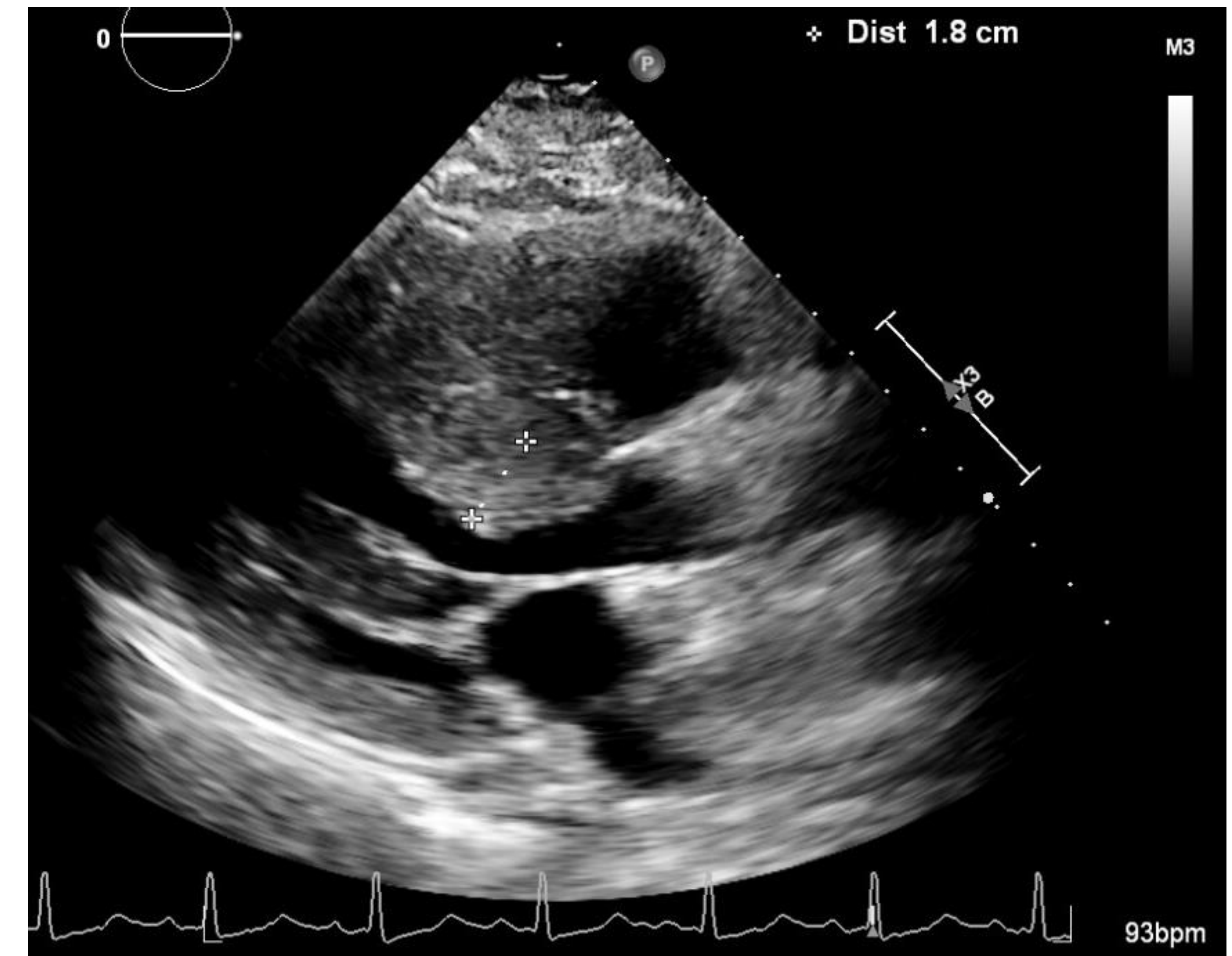
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Case Presentation

- 24 y/o G7P0060 at 27² weeks' gestation with mild intermittent asthma, heterozygous Factor V Leiden, proven amide LA allergy, and MYBPC3-associated HOCM with AICD placement presented with abdominal pain, worsening shortness of breath, and chest tightness.
 - Placental abruption was ruled out; TEE w/ severe asymmetric septal hypertrophy, systolic anterior motion of the mitral valve, preserved LVEF (>55%), and LVOT gradient of 69 mmHg.
- ICU for invasive monitoring, aggressive volume resuscitation, device interrogation, and medication optimization.
- Multidisciplinary team meeting w/ MFM, OB Anesthesia, Cardiac Anesthesia, Cardiology, Cardiothoracic Surgery.
- **Electively delivered @ 30 week via cesarean section w/ 3% 2-chloroprocaine for all line placements and neuraxial anesthesia**
 - Pre-Induction Arterial Line
 - Venous & Arterial Sheaths for ECMO conversion
 - Central Venous Access & PA Catheter
 - Slow titration of epidural
- Uncomplicated Delivery; Discharged POD #3



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Learning Points

- Management of HOCM requires particular attention to preload, afterload, and heart-rate.
- No consensus exists regarding optimal anesthetic type, however, neuraxial anesthetics have gained increasing popularity.
- If neuraxial is opted for, single shot spinal should be avoided 2/2 sympathectomy, which can worsen outflow tract obstruction.
- While local anesthetic allergy is exceedingly rare, epidural anesthesia for cesarean section can safely be administered with an ester local anesthetic, despite the need for frequent re-dosing.
- Paradoxically, the short duration of action of 3% 2-chloroprocaine allows for tighter hemodynamic control
- Careful attention to prevent LAST-local anesthetic use for placement of invasive monitors, sheaths, and loading epidural is additive.