Management of Hypertrophic Obstructive Cardiomyopathy During Cesarean Section

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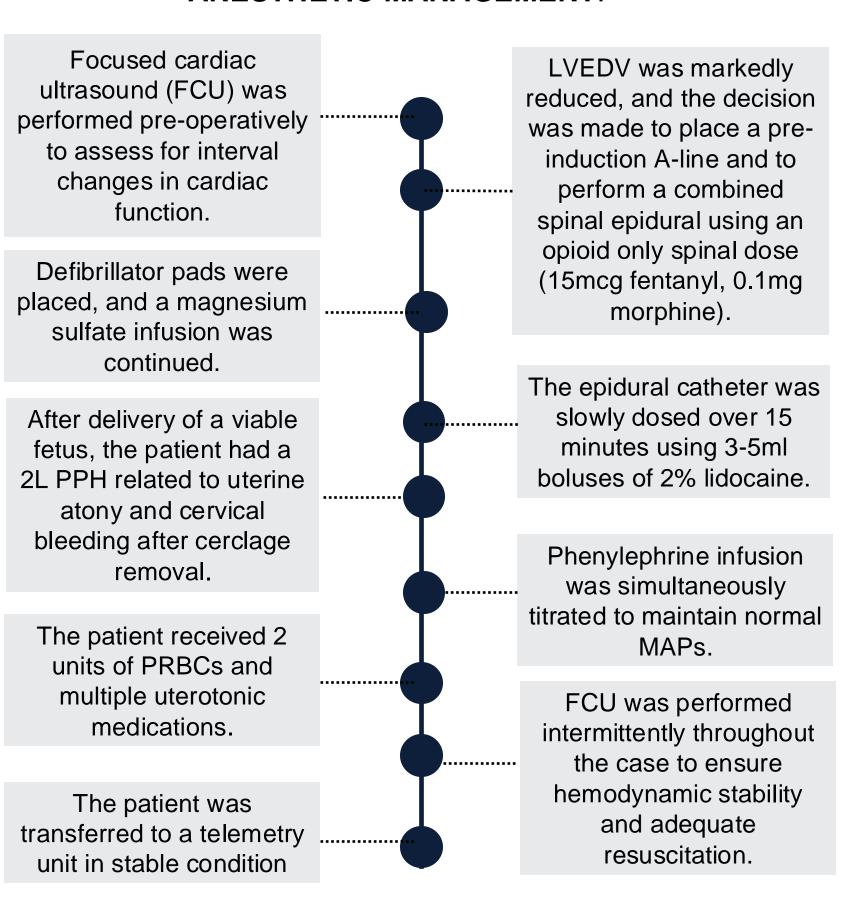
INTRODUCTION:

- HOCM is the most common genetic cardiac condition in the United States (prevalence 1:200-500).
- Data is minimal regarding intrapartum management. 1,2
- Physiologic changes of pregnancy & disease heterogeneity make peripartum management challenging.
- <u>Key considerations</u>: ensuring adequate preload, stroke volume, and cardiac output to support uteroplacental perfusion and hemodynamic stability.³

PATIENT BACKGROUND:

- 36-year-old G2P0101 with a 5-year history of HOCM (WHO class 2-3), paroxysmal VTach, and chronic HTN admitted to at 35w4d for expectant management of superimposed pre-E with severe features.
- History of cervical insufficiency s/p rescue cerclage.
- Maternal cardiac MRI → significant LVH, 2.5cm septum
- Second trimester echo → estimated LVEF 65-70%.
- Continuous wearable cardiac monitor (ZioPatch)
 placement earlier in pregnancy w/ an episode of non sustained VTach. Given this cardiac history, evolving
 pre-eclampsia refractory to IV medications, and
 prior C-section the OB team recommended urgent
 repeat C-section at 35w5d.

ANESTHETIC MANAGEMENT:





CONCLUSIONS:

- Patients with HOCM require careful peripartum management. Use of opioid-only spinal dosing and slow loading of epidural local anesthetic provides hemodynamically stable neuraxial anesthesia for cesarean delivery.
- This case illustrates the utility of FCU for hemodynamic assessment in parturients undergoing urgent surgery.
- Moolla M, Mathew A, John K, Yogasundaram H, Alhumaid W, Campbell S, Windram J. Outcomes of pregnancy in women with hypertrophic cardiomyopathy: A systematic review. Int J Cardiol. 2022 Jul 15;359:54-60. doi: 10.1016/j.ijcard.2022.04.034. Epub 2022 Apr 12. PMID: 35427704.
- Maron BJ, Desai MY, Nishimura RA, Spirito P, Rakowski H, Towbin JA, Rowin EJ, Maron MS, Sherrid MV. Diagnosis and Evaluation of Hypertrophic Cardiomyopathy: JACC State-of-the-Art Review. J Am Coll Cardiol. 2022 Feb 1;79(4):372-389. doi: 10.1016/j.jacc.2021.12.002. PMID: 35086660.
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Focused cardiac ultrasound (FCU) was performed pre-LVEDV was markedly operatively to assess for reduced, and the decision interval changes in cardiac was made to place a prefunction. induction A-line and to perform a combined spinal Defibrillator pads were epidural using an opioid placed, and a magnesium only spinal dose (15mcg sulfate infusion was fentanyl, 0.1mg morphine). continued. The epidural catheter was After delivery of a viable slowly dosed over 15 fetus, the patient had a 2L minutes using 3-5ml PPH related to uterine boluses of 2% lidocaine. atony and cervical bleeding after cerclage removal. Phenylephrine infusion was simultaneously titrated to maintain normal MAPs. The patient received 2 units of PRBCs and multiple FCU was performed uterotonic medications. intermittently throughout the case to ensure The patient was transferred hemodynamic stability and to a telemetry unit in stable adequate resuscitation. condition and there were no additional complications.