

Emergent Intrapartum Cesarean Delivery in a Grand Multiparous Parturient Supported by a Left Ventricular Assist Device

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Mechanical circulatory support relatively contraindicated in pregnancy¹⁻³

↑ Maternal and fetal risk
Hemodynamic stress
Thrombotic events
Infectious complications
Teratogenic medications
Uterine compression



Increasing prevalence of Left Ventricular Assist Devices (LVADs) in pregnant patients with advanced heart failure¹⁻³

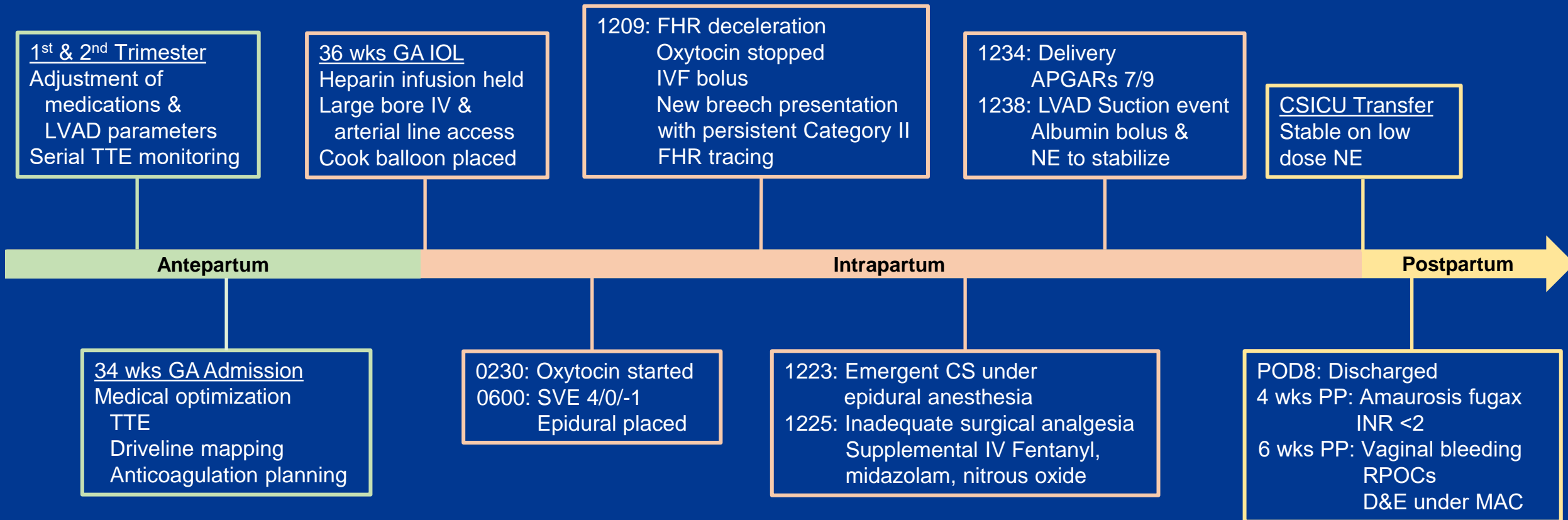
Limited data to inform guidelines and clinical management



Case: 38-year-old G8P7 with substance use disorder, remote pulmonary embolism, and peripartum cardiomyopathy requiring a HeartMate 3 LVAD who underwent successful emergent intrapartum cesarean delivery

References: 1. Marek-Iannucci et al 2023; 2. Pacheco et al 2023; 3. Yadalam et al 2023.

38 yo G8P7 with substance use disorder, remote pulmonary embolism, and peripartum cardiomyopathy requiring an LVAD



Abbreviations: TTE (transthoracic echocardiography); wks (weeks); GA (gestational age); IOL (induction of labor); IV (intravenous); SVE (spontaneous vaginal exam); FHR (fetal heart rate); IVF (intravenous fluid); CS (cesarean section); NE (norepinephrine); CSICU (cardiac surgical intensive care unit); POD (post-operative date); PP (post-partum); INR (international normalized ratio); RPOCs (retained products of conception); D&E (dilation and evacuation); MAC (monitored anesthesia care).

Multidisciplinary Approach for Peripartum Considerations

*Cardiac Anesthesia, Cardiac Surgery, Cardiology, Critical Care, Hematology
Maternal-Fetal-Medicine, Nursing, Obstetric Anesthesia, Pharmacy Teams*



	ANTEPARTUM	INTRAPARTUM	POSTPARTUM
CARDIAC	LVAD optimization Baseline interrogation Serial TTE per trimester Driveline mapping in the event of cesarean delivery	Contingency planning Massive transfusion Sepsis Cardiopulmonary bypass Extracorporeal membrane oxygenation	Hemodynamic monitoring Cardiac output Stroke volume Systemic vascular resistance
MEDICATION	Teratogenic effects Guideline directed therapies Anticoagulation	Anticoagulation timing Physiologic considerations Uterotonics Antifibrinolytics Vasopressors	Anticoagulation timing Breastfeeding implications
FACILITY/ LOCATION	Level IV maternal care Regional perinatal health center	Delivery location Labor and delivery Intensive care unit Cardiac operating room	Post delivery location Labor and delivery Intensive care unit
OTHER	Early hospital admission Resource allocation	Induction of labor timing Delivery mode Hemodynamic monitoring & access Neuraxial candidacy	Outpatient follow-up Contraception