

Management And Cesarean Delivery Of A Parturient With Refractory AF-RVR And Severe Peripartum Cardiomyopathy



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Preadmission course

This poster describes the peripartum management of a 35-year-old G2P0010 who presented with refractory AF-RVR and symptomatic peripartum cardiomyopathy (EF 10%) in her third trimester. Past medical history was significant for Hypertension, Atrial fibrillation (for which she was taking rivaroxaban) and obesity status post gastric sleeve surgery. Echocardiography in 2017 showed an EF of 45-50% with no valvular or wall motion abnormalities. The patient was initially referred to our peripartum navigation team at 31 weeks EGA when she was admitted to the hospital for persistent AF-RVR (rate 180-200) and worsening physical status (NYHA Class II). During this admission, she underwent two unsuccessful cardioversions and was discharged home on oral diltiazem therapy for rate control. At 36 5/7 weeks, she was admitted to the CV-ICU due to exacerbation of AF-RVR and worsening physical status (NYHA Class III).

Anesthetic Management

PreOP

- TTE while in AF-RVR showed an EF of 10%, severe MR, and normal RV function
- Her CARPREG 2 Score was 5, placing her at >41% risk of cardiac adverse event in the peripartum period
- Decision was made to perform cesarean delivery under general endotracheal anesthesia with an ECMO team on standby.
- Preoperative arterial and central venous access was obtained.

IntraOP

- Following uneventful induction of anesthesia, Swan Ganz catheter and TEE were placed to guide intraoperative care
- Intraoperative pulmonary artery pressure index (PAPi) was greater than one, indicating the need for right heart support with milrinone and epinephrine
- Following delivery of a healthy male infant with Apgar scores of 9 / 9 (EBL 500 mL), the patient was transferred intubated to the CV-ICU

PostOP

- Postpartum hypotension and AF-RVR were managed with epinephrine, amiodarone and milrinone infusions
- Successful TEE and cardioversion were performed on POD 0, she was extubated on POD 1, and discharged home in sinus rhythm on postpartum day 7
- Cardiac MRI eight weeks post delivery showed that the patient was in sinus rhythm with an EF of 50%.

Discussion

- 20% of parturients with supraventricular arrhythmias will experience an exacerbation during their pregnancy, and cardioversion is frequently unsuccessful if exacerbations are precipitated by volume overload
- Risk stratification through use of scores such as CARPREG 2 scores allows for better coordination of care and planning for invasive monitoring
- PAPi is a useful tool for assessment of need for right heart support.
- As illustrated here, optimal outcomes for mother and baby are best achieved through early coordination of care by a peripartum navigation team.



Intraoperative 4 Chamber TEE Image

References

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