

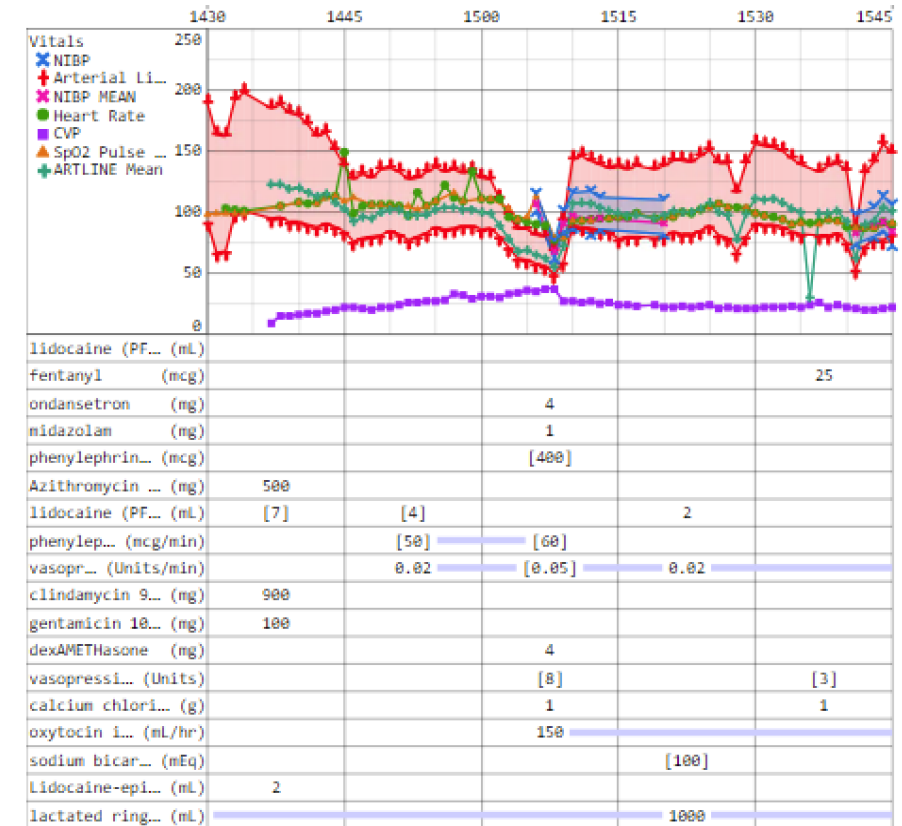
Background

- Significant advances in the treatment of complex congenital heart conditions has led to increased survival to childbearing age, and therefore increased incidence of pregnancies complicated by maternal cardiac disease
- When these lesions are refractory to treatment or go untreated, perinatal morbidity and mortality significantly increase
- Pulmonary hypertension (pHTN) is a common sequelae of left heart dysfunction and has critical physiologic implications during pregnancy and delivery

This case report highlights the considerations and management of a pre-eclamptic patient with a complex cardiac history presenting for caesarean delivery.

Case

- 40-year-old G4P3 at 34w2 by embryo transfer, presented via helicopter due to severe range blood pressures.
- PMH of hypertrophic cardiomyopathy with subaortic stenosis (status post septoplasty 2017), severe pHTN (RSVP 60-70 mmHg), three prior C/S with BTL, chronic thrombocytopenia of unknown etiology (platelets 26 x10⁹/L), and GDM.
- Intraoperatively, an arterial line, central line and an epidural were placed and the latter was slowly titrated with 2% lidocaine to a T4 level.
- Shortly after delivery of the fetus and placenta, the patient developed hypoxia and subsequent profound hypotension - Vasopressors were titrated, nitric oxide (iNO) initiated

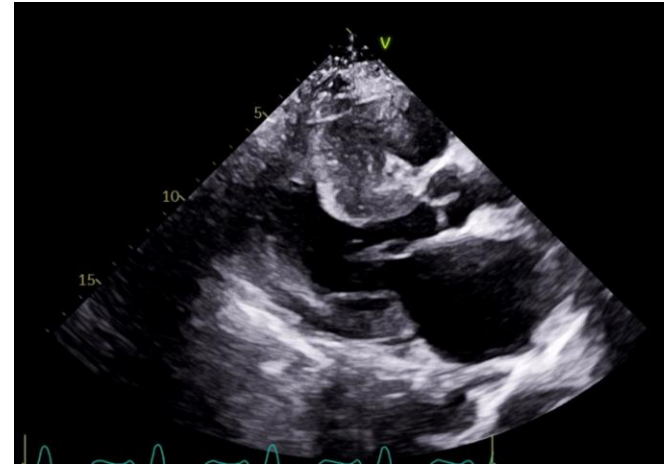


Teaching Points

- Tachycardia worsens LVOT obstruction, can lead to acute left-sided cardiogenic shock
- Maintaining adequate afterload and euvolemia is also critical for cardiac output
- Hypoxia and hypercarbia can lead to physiologic pulmonary vasoconstriction, exacerbating pHTN and right heart failure
- Extreme fluid shifts during delivery include loss of pre-load due to hemorrhage vs placental auto-transfer of 300-500 mL

Patient's pre-op TTE

Intraventricular septal hypertrophy seen in diastole and SAM of posterior leaflet of mitral valve causing dynamic LVOT obstruction during systole



End diastole



Systole