Anesthetic Management of a Pregnant Patient with Preeclampsia and a History of Corrected Transposition of Great Vessels

Abstract Type: Case Report/Case Series
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Introduction: With advances in surgical technique it is estimated that 85% of children with congenital heart disease survive to adulthood. The most common type of cyanotic congenital heart disease is transposition of the great vessels. A history of congenital heart disease in a pregnant patient can complicate the anesthetic management of labor and delivery. We present the anesthetic management of a parturient with preeclampsia and a history of corrected transposition of the great vessels (TGV).

Case Report: A 34 y.o.G2P1 at 34.1 weeks gestation was referred for anesthesia consultation.


Anesthesia History: NSVD in 2006 with epidural. NAC.

PE: Height 60 inches, weight 120 lbs. No pitting edema. No JVD. VS: 80, 18, 109/64. Lungs: clear to auscultation bilaterally. Heart: RRR. No murmurs.

CXR: No cardiomegaly. Clear lungs.
EKG: NSR, RBBB, RVH.

Anesthetic Management: A multidisciplinary meeting, involving OB, anesthesiology, and cardiology, was held to discuss the peripartum management of this patient. Echocardiogram was reviewed with pediatric cardiologist. Lumbar epidural was planned for labor and delivery.

The patient presented to L&D early because of superimposed preeclampsia with BP 140s-170s/80s-90s. Normal labs, and the pt. was asymptomatic. Good analgesia was maintained with lumbar epidural using bupivacaine 0.0625% and fentanyl 4 mcg/ml at 10 ml/hr. The pt. delivered vaginally and was discharged home w/o complications.

Discussion: TGV is a cyanotic right-to-left shunt congenital cardiac lesion with an incidence of 40 per 100K live births. TGV is incompatible with life without a PDA or VSD, because of a lack of connection between systemic and pulmonary circulations. Patients may develop pulmonary HTN and even Eisenmengers syndrome. Arrhythmias are not uncommon and may be related to surgical repair or abnormal coronary anatomy. Maternal morbidity and mortality during pregnancy and the peripartum period are increased due to hemodynamic changes associated with pregnancy. Multidisciplinary management and communication is important for management. Baseline EKG and echocardiogram should be obtained. A neuraxial technique involving dilute local anesthetic and high dose narcotic can be used for vaginal delivery or C/S to blunt the sympathetic response to pain. Blunting the sympathetic response to DL is important if using GA. Fluids should be used judiciously, especially in the presence of preeclampsia.