

Anesthetic Management of a Patient with Complex Congenital Heart Disease and Cervical Spine Disease: Only Teamwork Will Make This Dream Work

NEVA LEMOINE MD, LAURA SORABELLA MD, KATE LINDLEY MD, SUSAN EAGLE MD, KAIT BRENNAN DO MPH

Pregnancy and Complex Congenital Heart Disease

Preconception counseling should include:

- Pregnancy may contribute to a decline in maternal cardiac status
- May not recover to baseline after pregnancy.

Maternal risk stratification in pregnancy is dependent on:

- The complexity of the primary cardiac lesion
- The presence of residual lesions
- Clinical sequelae (e.g. heart failure, arrhythmias, or cerebrovascular events)

The risks can be minimized by:

- Multidisciplinary cardio OB care that extends from the antepartum period into the postpartum period



Pregnancy and Cervical Spine Disease

Lack of controlled studies: recommendations are based on expert consensus and retrospective data

Patients with pre-existing pressure upon neural structures may suffer additional injury from local anesthetics

High concentrations and volumes of local anesthetics should be avoided to minimize the risk of local toxicity, ischemia or mechanical compromise

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1st Trimester

Consults

- MFM
- Cardio OB
- OB Anesthesia

27w4d

Worsening Heart Failure

- Hospitalized
- RHC + leave in PAC: PAs 42/30 (37), CI 2.8
- OHT eval opened

Postpartum

Postoperative Course

- SvO2 ↓ 47%
- Diuresis → SvO2 ↑ 75%
- Discharged PPD 6
- PP LVEF → 25%
- Ongoing AF/SVT

34y Black G4P0030

PMHx

- CoA s/p repair w/ residual stenosis
- VSD s/p repair w/ LV scar and LVEF 30%
- PAD w/ LE ischemia
- Complex spine disease w/ myelopathy
- BMI 41, OSA, asthma, MP3

- US: cervical shortening
- GA chosen 2/2 myelopathy
- Induction → VT
- Repeat TTE → LVEF 10-15%

23w3d

Cerclage Placement

- GA due to myelopathy and symptomatic HF
- Pre-induction R A-line and L femoral v 5Fr for possible MCS
- PAP 63/34 → 30/18
- LVEF → 20%
- Transported to ICU

28w0d

Cesarean Delivery



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Teaching Points



Parturients with CHD

- Mortality Risk
- Multidisciplinary team
- Peripartum procedures



Anesthetic Concerns

- Neuraxial vs GA
- Cardiac depression
- Rescue MCS



Timing of Delivery

- Maternal vs fetal benefit
- Comorbidity optimization



Postpartum Period

- Heart Failure
- Arrhythmias
- Hypercoagulable

