

# TRANSPOSITION OF THE GREAT ARTERIES IN THE OBSTETRIC PATIENT

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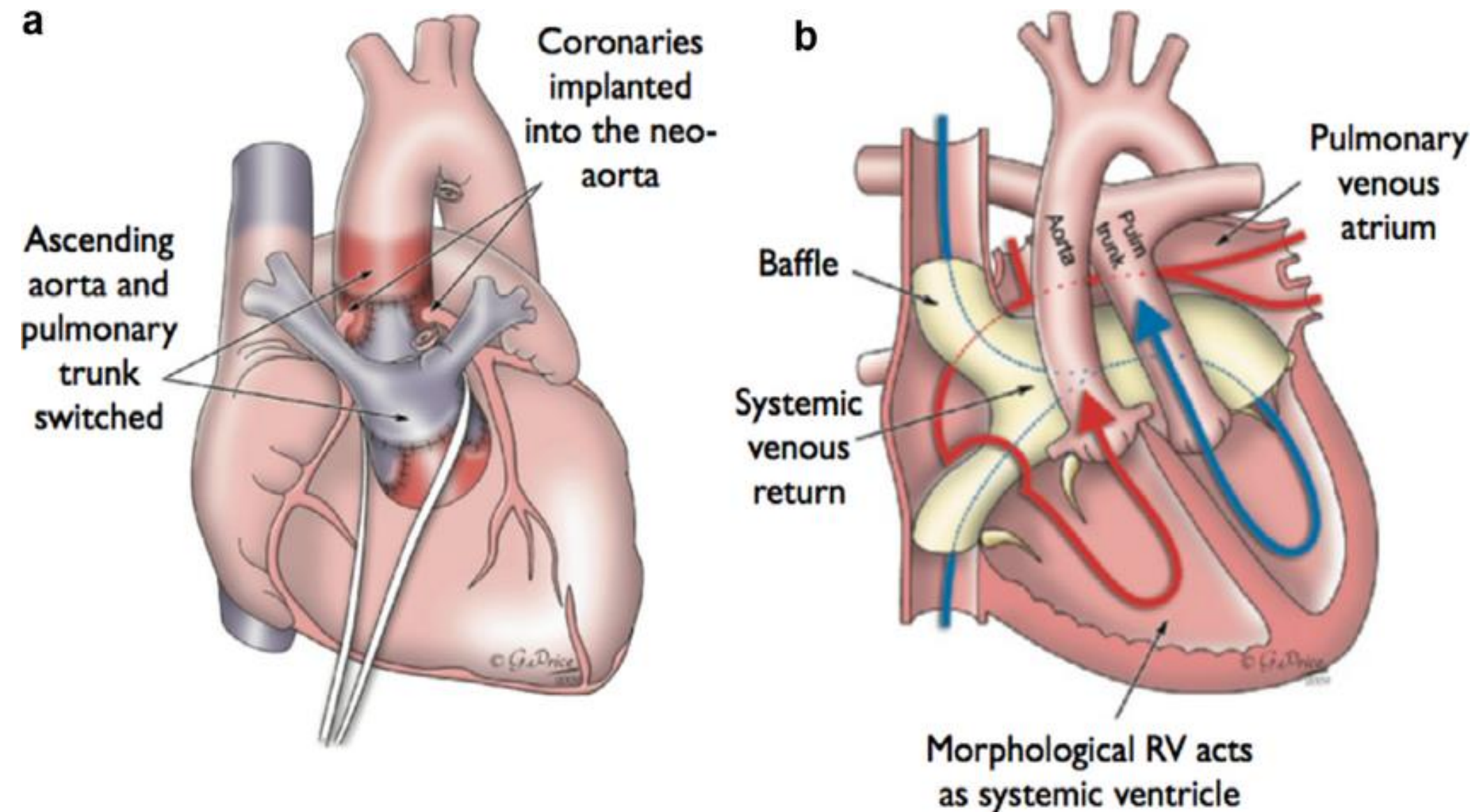
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## Introduction

- TGA is the second most common congenital heart defect, in which the aorta arises from the right ventricle and the pulmonary vein from the left ventricle
  - Results in 2 parallel circuits and is incompatible with life without a shunt (Septal defect or PDA)
- Two main surgeries to repair transposition of the great arteries:
  - Arterial switch
  - Atrial switch



## Case Report

- Case:
  - 33-year-old G3P1011 at 36 weeks 3 days presenting for planned cesarian delivery of dichorionic diamniotic twins
  - PMHx: transposition of the great arteries s/p arterial switch repair on day 3 of life.
    - EKG on admission show sinus tachycardia
    - TTE: LVEF 55% (stable from last exam), repaired D-TGA with arterial switch, RV function grossly normal, moderate AR, and dilated ascending aorta (3.9cm), mild pulmonary HTN
- Anesthetic Plan:
  - CSE performed in the operating room with low dose 0.75% Bupivacaine, intrathecal morphine, and fentanyl
  - Blood pressure and heart rate were tightly controlled with both IM and IV ephedrine along with a phenylephrine infusion
  - Special consideration was taken to maintain adequate ventilation and oxygenation to avoid worsening of the patients pre-existing pulmonary hypertension

## Teaching Points

- Different complications associated with the two main surgeries utilized to repair transposition of the great arteries
  - Atrial switch: good perioperative survival rate, long-term complications include right heart failure, atrial arrhythmias, Tricuspid Regurgitation
  - Arterial switch: initially poor perioperative survival, fewer long-term complications, but can develop neo-pulmonary stenosis and neo-aortic dilation
- Anesthetic considerations:
  - Delivery plan: Vaginal vs. Cesarean
  - Important to avoid huge variations in Blood pressure and heart rate
    - Avoid straight spinal and general anesthesia if possible
    - Maintain adequate volume status and tightly monitor hemodynamics
    - Adequate IV access is essential, may consider central or arterial access
  - Maintain lower pulmonary and systemic vascular resistance
    - Avoid hypercapnia or acidosis
    - Limit medications that increased SVR



## References

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