Fetal Cardiac Interventions

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Objectives

- Contemporary fetal cardiac interventions
Not Much Has Changed...So Let’s See Something Cool!
Objectives

- Contemporary fetal cardiac interventions
- Other conditions that cardiac assessment is critical?

→ Need for fetal surgery
Fetal Surgery
Two Tenants

- Unsurvivable condition
  - High rate of fetal demise

- Condition where the postnatal course can be altered
APPLICATION IN CARDIOLOGY
AORTIC VALVULOPLASTY
Evolving Hypoplasia

- Early relief of the obstruction
  - Prevents Hypoplasia

- Maxwell, 1989
  - 3/3 survived to delivery

INDICATIONS

- Evolving HLHS
- HLHS + restrictive/in tact septum
- PA/IVS + evolving HRHS
- Other structural anomalies + hydrops
RISKS

- 10% fetal demise
- 10% preterm labor
- Further postnatal outcomes have not been studied
BIVVENTRICULAR OUTCOMES

- 30% at birth
- 8% converted after palliation

- Favorable predictor
  - Larger LV size
  - Higher LV pressure
OUTCOMES FOR OTHER INDICATIONS

- HLHS with septal restriction
  - Fetal demise = 10%
  - Postnatal surgical survival = 58%

- Evolving HRHS
  - Technically feasible
  - Outcomes unknown
WHAT’S THIS?

- 23 year old with mo-di twins

Donor Twin

Recipient Twin
QUNITERO STAGES

I. Oligo + Poly

II. Loss of bladder in recipient

III. Cardiac changes

IV. Hydrops
WHAT’S THIS
SUMMARY

- Cardiac interventions ➔ EARLY

- Cardiac Assessment critical
  - Twin-to-twin transfusion
  - Tumors
    - High output failure
    - Failure from compression