Complicated monochorionic twin pregnancy ultrasound evaluation

Suspected abnormal US for monochorionic twin pregnancy

- Targeted anatomy US, fetal echo if not previously completed; confirm chorionicity
- EFW, MVP each twin, TVCL if 16-28 weeks EGA

MVP > 8 cm AND MVP < 2 cm

Yes

Twin twin transfusion syndrome*
ID twin as ‘donor’ (oligo) and ‘recipient’ (poly)

Obtain/report multivessel Doppler; CV evaluation each twin *
- UA (s/d ratio % tile; normal, absent, or reversed diastolic velocity)
- MCA PSV and RI/PI
- Ductus venosus (normal, absent, reversed a-wave; s/a ratio % tile)
- Recipient
  - Tricuspid regurgitation (presence, absence); ‘e,’ ‘a’ wave evaluation
  - Cardiothoracic ratio (CA/TA); ventricular wall thickness
  - UV pulsations
- Report Quintero stage; comment on CV status
- Epic: PDXTTTS; PDXTTTSPOSTLASER

No

Discordant fetal anomalies

- EFW < 10th % tile, growth discordance > 20%, or both

Yes

Selective IUGR*

Obtain/report:
- UA Doppler (s/d ratio % tile; normal, absent, reversed or intermittent reversed EDF)
- DV (normal, absent, reversed a-wave; s/a ratio % tile)
- BPP as indicated

No

MVP > 8 OR MVP < 2

Yes

TAPS* – twin anemia, polycythemia sequence

Individual therapy

No

Twin reversed arterial perfusion

Acardiac twin

* hybrid lesions may occur – consider management based on cardiovascular findings on evaluation
^ see Doppler in Twin Pregnancy outline

Management (individualize) by stage:
I: weekly assessment; amnioreduction (AR) for maternal s/s; consider stage I TTTS trial enrollment (https://www.naftnet.org)
II, III, or IV: referral for laser photocoagulation 16-26 weeks; AR after 26 weeks; BMZ > 23 weeks
V: EGA based fetal testing, consider MRI on remaining twin for CNS injury (EGA dependent)

* SIUGR classification *
- Type I: UA Doppler normal, elevated s/d, forward diastolic velocity
- Type II: AREDF UA
- Type III: iAREDF UA
See Epic PDXIUGR for suggested management
These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur during pregnancy. They should not be interpreted as a standard of care, but instead represent guidelines for management. Variation in practices should take into account such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities.

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