UCSF Benioff Children's Hospitals

UCSF Fetal Treatment Center
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San Francisco, CA 94158

Phone: 800-RX-FETUS or 800-793-3887
Fax: 415-502-0660
Email: fetus@surgery.ucsf.edu
Website: https://fetus.ucsf.edu/

Monochorionic Twins

Recommendations for providers managing a monochorionic twin pregnancy

Complications unique to monochorionic twins

Unequal placental sharing: Defined as growth discordance >20 percent; oligohydramnios (a deficiency of amniotic fluid) may be seen in the small twin, without concurrent polyhydramnios (an excess of amniotic fluid) in the normally grown twin.

Selective intrauterine growth restriction (S-IUGR): A more severe subtype of unequal placental sharing wherein the smaller twin weight measures <10th percentile.

Twin-to-twin transfusion syndrome (TTTS): Defined as a deepest vertical pocket (DVP) of >8 cm in one twin and <2 cm in the other twin simultaneously; TTTS can be seen overlapping with growth discordance, but these are separate diagnoses with different pathophysiologies.

Twin anemia polycythemia sequence (TAPS): Defined by discordant middle cerebral atertial (MCA) Doppler ultrasound tests either spontaneously or post
laser surgery.

Non-TTTS amniotic fluid discordance: For example, polyhydramnios plus normal, oligohydramnios plus normal, or polyhydramnios plus oligohydramnios.

Discordant anomalies: Birth defects seen in only one of a monozygotic (MZ) twin pair; thought to result from abnormal embryo splitting.

Twin reversed arterial perfusion (TRAP) sequence: Defined by reversed arterial flow in the setting of an "acardiac" and "pump" twin (may be seen with hydrops and/or polyhydramnios).

Components of a UCSF evaluation

- Level II anatomic survey for (discordant) fetal anomalies.
- Special attention paid to placental cord insertion locations and vascular mapping.
- Fetal echocardiography for structural and functional integrity.
- Fetal brain MRI after 22 weeks when indicated and appropriate; often performed status post an ablative procedure to assess for anoxic brain injury in the surviving twin.

Potential surgical procedures

- Fetoscopic selective placental laser ablation.
- Radio-frequency ablation (RFA) for cord occlusion; performed for selective termination when indicated, but typically not available after 24 weeks.

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Time frames for referrals to the UCSF Fetal Treatment Center

We welcome your call at any time to discuss your findings and obtain guidance about timing for referral and level of urgency (800-RX-FETUS).

Consider referral with these clinical indicators

- Significant amniotic fluid discordance: pre-TTTS or atypical non-TTTS as described above
- Significant growth discordance (>20 percent)
- Isolated abnormal Doppler results
- Suspected discordant anomaly

Unless there is a lethal anomaly, if possible refer prior to 24 weeks to retain the option of RFA.

Call for timely referral (patient should be evaluated within 1 week)

Concurrent DVPs >8 cm and <2 cm, with normally sized bladder visualized and normal umbilical arterial (UA) Doppler results.

Call for urgent referral (patient should be evaluated within a few days)

- Concurrent DVPs >8 cm and <2 cm and either no visible donor twin bladder, abnormal UA Doppler results, suspected recipient cardiomyopathy or hydrops.

For additional information and patient-friendly explanations of conditions, please visit https://fetus.ucsf.edu/.

Make a referral

1. Please fax the following patient information to 415-502-0660:
   - Demographic information
   - Copies of the front and back of her insurance card
   - All obstetric/maternal-fetal medicine (OB/MFM) medical records
2. If insurance authorization is required, please download our Excel file of evaluation codes at **http://bit.ly/ucsfftc**
3. Afterwards, call 800-RX-FETUS or 800-793-3887 to discuss your patient and complete the referral process.