Twin-to-Twin Transfusion Syndrome – TTTS

Twin-to-Twin Transfer Syndrome, also called TTTS, is a rare condition. It occurs when abnormal blood vessels develop in the shared placenta of identical twins. This results in an uneven blood flow to the infants.

The twin that receives too little blood is called the donor twin. This infant is often smaller and may have anemia and be dehydrated.

The twin that receives too much of the blood is called the recipient twin. The extra blood can cause the heart to work harder.

Diagnosis
TTTS is usually diagnosed by an ultrasound exam during pregnancy. The uneven size of the twins (called discordant twins) is seen on the images.

Treatment
Treatment depends upon how severe the problem is and how far along the pregnancy is.

During Pregnancy:
- Repeated ultrasound exams and/or amniocentesis may be needed to check the twins' condition and to drain extra fluid.
- Other tests may be done during pregnancy such as a fetal MRI, and fetal echocardiography to closely check the infants' hearts.
- Laser surgery to close off the abnormal blood flow from one twin to the other may be done. A small incision in the mother's abdomen and a scope is inserted to examine the blood vessels. A laser is used to correct the blood flow.

After Birth:
- The twins are often born prematurely and may need care in the NICU (neonatal intensive care unit).
- The infants may have a chest x-ray and blood tests to check:
  - Complete blood count
  - Clotting studies
  - Electrolyte balance
- The donor twin may need a blood transfusion to treat anemia.
- The recipient twin may need to have the volume of body fluid reduced. This may involve an exchange transfusion. Medication to prevent heart failure may also be needed.

Outlook
The outlook depends on how severe the TTTS is. In mild cases, both twins often recover fully. In severe cases, the death of an infant may occur.

Talk with your doctor about your questions and concerns.

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