

Twin-to-twin-to-twin transfusion syndrome

Kalie Kuhl gave birth this week to triplets with twin-to-twin-to-twin syndrome, and all three fetuses were affected. In February, a surgery was performed in utero to reverse the effects of the transfusion syndrome, and this is credited with saving the babies' lives.

THE KUHL TRIPLETS: THE PROBLEM

The placenta contained abnormal shared blood vessels, which connected the umbilical cords of the triplets. This led to a transfusion, which caused two of the fetuses, Trevin and Brodin, to have decreased blood flow and amniotic fluid, and the other, Gavin, to have increased blood flow and increased amniotic fluid. This resulted in one triplet, Gavin, being larger than the others.

What makes these triplets unique

Twin-to-twin transfusion syndrome is rare, but even rarer in the case of triplets. All three had the syndrome, so doctors had to perform the surgery for all three.

Trevin James
Weight:
 Time of diagnosis: 140 grams
 Birth: 2 pounds, 14 ounces

Gavin Frederick
Weight:
 Time of diagnosis: 198 grams
 Birth: 3 pounds, 15 ounces

Brodin Robert
Weight:
 Time of diagnosis: 154 grams
 Birth: 3 pounds, 3 ounces

Shared placenta
 Helps provide nourishment and oxygen to the fetuses

Umbilical cord
 Connects the fetus to the placenta

Amniotic membrane

Amniotic fluid

"Stuck" fetus
 Reduced amniotic fluid restricts fetal motion, giving appearance of being "stuck." Trevin and Brodin were characterized this way when they were diagnosed in January with the syndrome.

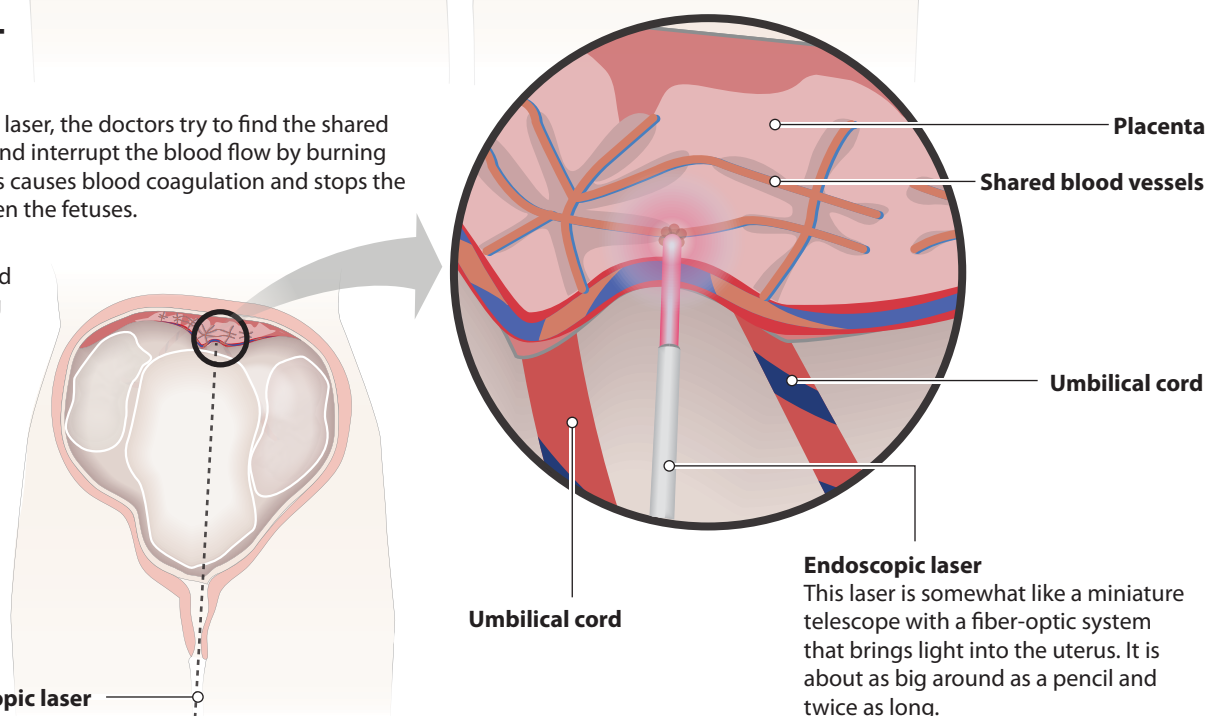
THE TREATMENT

The procedure

Using an endoscopic laser, the doctors try to find the shared vessels responsible and interrupt the blood flow by burning them with lasers. This causes blood coagulation and stops the flow of blood between the fetuses.

The laser was inserted through the opening underneath the uterus. It was a difficult process because the laser had to be positioned around the fetuses and maneuvered through the uterus to the placenta.

Path of the endoscopic laser



Endoscopic laser
 This laser is somewhat like a miniature telescope with a fiber-optic system that brings light into the uterus. It is about as big around as a pencil and twice as long.

Sources: Rockford Memorial Hospital, Twin to Twin Transfusion Syndrome Foundation, University of Michigan Health Systems, Gannett News Service, Dr. Timothy Durkee, OB/GYN, Rock Valley Women's Health Center