# Twin-Anemia Polycythemia Sequence: A Guide for Patients

*Patient Information Series – What you should know, what you should ask.*

**What is TAPS?**

Twin Anemia-Polycythemia Sequence (TAPS) is a condition that happens when twins share a placenta and blood is not shared evenly between them. This means one twin gives more blood to the other, leading to two different problems: the twin giving the blood ends up with too little blood (anemia) and is called the “donor” twin, while the twin receiving the blood ends up with too much (polycythemia) and is called the “recipient” twin.

**What are the signs and symptoms of TAPS?**

In TAPS, one twin receives too many red blood cells, which makes their blood thicker and slows the movement of blood in the vessels. This can increase the chance of developing blood clots. On the other hand, the twin giving away too much blood becomes anemic, putting pressure on the heart to compensate for the anemia. This demand on the heart can become severe and lead to heart (pump) failure, causing a condition called “hydrops” where fluid builds up in or around important organs like the heart and abdomen and underneath the skin. Pregnant individuals rarely show symptoms. Additionally, TAPS develops slowly, and the fluid around the babies (in the amniotic fluid) can often remain normal.

**How is TAPS diagnosed?**

TAPS can be found out before or after the babies are born. Doctors use a special kind of ultrasound to look at how fast blood is moving in the twins' brains. If they see that one twin's blood is moving very fast (a sign that they might not have enough blood) and the other twin's blood is moving very slow (a sign that they might have too much blood), then the doctors might suspect TAPS.

**What are the management options for patients diagnosed with TAPS?**

When it comes to managing and treating TAPS, the options vary based on severity of the condition, when it appears in the pregnancy and the overall health of the twins.

Expectant Management:

In twins with mild TAPS, careful monitoring may be recommended. This includes regular ultrasounds to track the twins' condition. Expectant management allows the doctors to observe the progression of TAPS and intervene only when necessary, minimizing risks associated with invasive procedures.

Intrauterine Interventions:

1. **Intrauterine transfusion** (IUT) involves directly transfusing blood to the anemic twin to correct anemia. This procedure can help balance the blood levels between the twins. It is performed under ultrasound guidance, ensuring precision and safety for both the pregnant individual and the babies. In some cases, when the recipient twin has received too much blood and the baby has a high red blood cell count (polycythemia), a procedure called “exchange transfusion” can be offered. In this procedure, some of the recipient twin’s blood is drawn and replaced with blood that has a lower red blood cell count. This helps the baby avoid complications from having too many red blood cells.

2. **Fetoscopic Laser Photocoagulation** (FLP) is a more advanced procedure where a laser is used to close off the connecting blood vessels in the placenta that cause the blood flow imbalance between the babies. This treatment can stop the progression of TAPS and allow both babies to develop more normally.

Following any intervention, close monitoring will continue to ensure the twins are developing well and to detect any changes in their condition promptly. Regular follow-ups are essential to assess the effectiveness of the treatment and to provide the best care for you and your twins.

**After birth: What to Expect?**

Right after your babies are born, doctors will do a detailed check-up to see how they are doing and if TAPS has affected their health. They will keep an eye on important health signs like heart rate, circulation, blood levels, and how well they are breathing. Depending on what the babies need, they might get extra help like oxygen, fluids through a vein, or blood transfusions to help them feel better. Your babies may need to stay in the Neonatal Intensive Care Unit (NICU) for close observation, especially if they were born early or have significant health concerns. The anemic (donor) baby might need a blood transfusion, while the polycythemic (recipient) baby may require an exchange transfusion to lower the hemoglobin levels and reduce blood thickness. Once your babies go home, it is important to go to follow-up appointments so doctors can keep checking on their growth, development, and health.

**What other questions should I ask?**

- ✓ How will we monitor the twins' condition throughout the pregnancy?
- ✓ What are the risks and benefits of these treatments?
- ✓ Are there any signs that would indicate a need for immediate intervention?
- ✓ How can we best support our twins' health and development after they are born?
- ✓ What are the long-term health implications for twins with TAPS?
- ✓ What support resources are available for families dealing with TAPS?

Your doctor will help you make the best choice for you and your baby. It is okay to ask questions to understand everything better.

*Last updated June 2024*