

EP12.58: Management of Twin anemia polycythemia sequence in the late second trimester - consideration for ultrasound guided intrauterine exchange transfusion

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BACKGROUND

- TAPS (twin anemia polycythemia sequence) is a rare complication of monochorionic twin pregnancies
- Characterized by intertwin transfusion through small placental anastomoses
- Clinical features include discordant fetal hemoglobin levels. Ultrasound guided IUT and exchange transfusion for management of TAPS is becoming a more common form of management but not standard of care.

BRIEF CLINICAL DESCRIPTIONS

Patient #1: Spontaneous TAPS stage 2 diagnosed at 27 weeks. Underwent 3 successful IUTs and exchange transfusion with persistent fetal anemia of one twin ultimately leading to delivery at 29 weeks

Patient #2: Post-laser stage 2 TAPS and concomitant pre-labor rupture of membranes diagnosed at 26w. Given PPRM findings in-utero transfusion was not offered and ultimately patient underwent cesarean delivery for preterm labor

Patient #3: Spontaneous stage 1 TAPS who underwent laser procedure at 22w. Delivered at 24 weeks for preterm labor and suspected chorioamnionitis



Figure 1: Patient #1 placenta dichotomy noted at diagnosis of TAPS. Do not twin placenta appears hyperechogenic secondary to edema

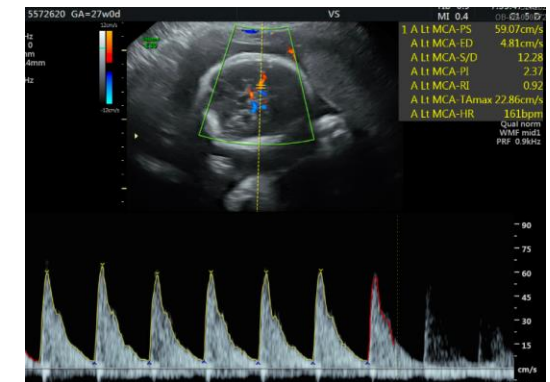


Figure 2: Patient #1 twin A middle cerebral artery concerning for fetal anemia with MoM of 1.8

	Patient #1	Patient #2	Patient #3
Maternal Age (years)	39	35	34
Obstetric History	G5P4004	G3P0111	G1P0
Maternal Medical History	Type 2 Diabetes Melitus Chronic hypertension	Chronic urticaria	none
Maternal Surgical History	1 prior cesarean section	n/a	LEEP
Fetoscopic Laser Procedure	N/a	Yes at 22w for Stage 1 TTTS	Yes at 22w6d for Stage 2 TTTS and Stage 1 TAPS
Gestational age at TAPS diagnosis	26w5d	26w2d	22w5d
MCA doppler findings at diagnosis	Twin A MoM >2 Twin B MoM <1	Twin A MoM 1.77 Twin B MoM <1	Twin A MoM 1.52 Twin B MoM <1
TAPS Stage	Stage 2	Stage 1 > 2	Stage 1
Intrauterine Transfusion	3 Intrauterine transfusions and exchange transfusions (GA 27w1d, 27w5d, 28w6d)	None	None
Complications	None	PPROM at 26w2d	Preterm labor and suspected chorioamnionitis
Steroids and Magnesium	Completed	Completed	Completed

	Patient #1	Patient #2	Patient #3
Delivery Route & Indication	Urgent c-section for persistently elevated MCA doppler of twin A	Emergent c-section for preterm labor and non-vertex presentation	Emergent c-section for preterm labor and non-vertex presentation
Gestational age at delivery	29w0d	27w0d	24w3d
Anemic Twin Fetal Weight	1.310 kg	0.735 kg	0.54 kg
Anemic Twin APGARs	8/8/8	1/5/6	1/3/5
Anemic Twin HCT	41	8.6	38.8
Anemic Neonate long term outcomes	Discharged from NICU at 6 weeks, clinically well now 6 months	Neonatal death DOL 2 secondary to severe pulmonary hypertension	Discharged from NICU at 5 months, clinically well now 6 months
Polycythemic Twin Fetal Weight	1.395 kg	1.14 kg	0.609 kg
Polycythemic Twin APGARs	9/9/9	5/1/7	1/2/5
Polycythemic Twin HCT	71.6	61-67	51.6
Polycythemic Neonate long term outcomes	Discharged from NICU at 6 weeks, clinically well now 6 months	Neonatal death DOL12 secondary to pulmonary hypertension	Neonatal demise at 2 months secondary to sepsis and NEC

TAKE HOME POINTS

- Management of TAPS in the second trimester requires careful evaluation given many nuances may affect antenatal management.
- In cases that IUT is appropriate, it may prolong the pregnancy and improve neonatal outcomes