

EP13.01. Ultrasound-guided interstitial laser cord occlusion in TRAP sequence: case series

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Objective

- To describe the perinatal outcome of patients who underwent interstitial laser cord occlusion for twin reverse arterial perfusion sequence in a single center.

Methods

- Six consecutive monochorionic multiple pregnancies with TRAP (reversed arterial perfusion in twins) were treated at a mean gestational age of 19.1 weeks (range: 16.1–24.0 weeks).
- All pregnancies were evaluated by detailed ultrasound, and the TRAP sequence was confirmed by ultrasound in the Maternal-Fetal Medicine Department. The indications for intrauterine surgery were: abdominal circumference ratio greater than or equal to 50%. All six surgeries were performed under local anesthesia with 2% lidocaine without sedation. A GA 600-3 laser fiber, a 600-micrometer galgalaser, was used. Surgery was performed using a 980-nanometer VELA 30B laser with a maximum energy of 600 watts and a power of 25 watts, and a Boston Scientific needle. The cessation of blood flow in the cord of the acardiac twin was documented by color Doppler ultrasound using Voluson E8 and pulsed wave ultrasound.

Results

- The procedure was completed in all cases. There were no notable intraoperative complications. Intrauterine death of the normal fetus occurred in one case, with an estimated weight of 399 grams (16.6%). Heart failure occurred in 33.3% (2/6). The overall incidence of premature rupture of membranes was 16.6% (1/6), at 21.4 weeks. The mean gestational age at delivery was 35.4 (range, 21.4–40) weeks, and the mean fetal weight was 2651 g (range, 2515–2740 g), with an adequate birth weight percentage. Neonatal survival of the normal fetus was 83.3%.

Conclusions

- The overall survival was good, only one fetus was lost and was due to premature rupture of membranes at 21 weeks. So we think this is a less expensive, accessible and feasible technique with an acceptable survival rate, with minimum risk for the mother

