

## **Fetoscopic management of triplet pregnancies complicated by twin-twin transfusion**

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### **Objective**

To describe the antenatal and neonatal outcomes of triplet pregnancies complicated by severe twin-twin transfusion syndrome (TTTS), managed with fetoscopic laser ablation (FLA) at Mount Sinai Hospital, Toronto, Canada.

### **Methods**

Retrospective study of 34 triplet pregnancies (12 (35%) monochorionic triamniotic (MC/TA) and 22 (65%) dichorionic triamniotic (DC/TA)), which were managed with FLA over 25 years (1998 - 2022). Procedural complications, antenatal and neonatal outcomes were analyzed and compared to 834 monochorionic diamniotic (MC/DA) twins undergoing FLA during the same period.

### **Results**

TTTS stage distribution did not differ between triplet and twin pregnancies. FLA was performed in triplets at a median gestational age (GA) of 20.0 weeks (IQR 17.5-22.0), similar to that in MC/DA twins at 20.4 weeks (IQR 18.4-23.3). Procedural complications were rare: intra-abdominal amniotic fluid leaking (2.9%), placental abruption (2.9%), accidental septostomy (5.9%); PPROM rates and procedure time were similar between the two groups. 92.6% of the unaffected triplets survived. At least one neonate survived in 90.6% and both in 62.5% of cases. In the TTTS-affected twin pairs in each set of triplets, double survival was 63.5% in DC/TA vs 60% in MC/TA triplets and at least one survived in 95% and 80% respectively ( $p=0.2$ ). Survival did not significantly differ from that of MC/DA twins managed with FLA, which was 90.4% (at least one) and 64.9% (both). Median GA at birth was 31.7 weeks (IQR 29.0 – 33.1), not significantly different from MC/DA twins (32.1, IQR 27.9-34.9;  $p>0.1$ ).

### **Conclusion**

Antenatal, postnatal outcomes and neonatal survival were similar between twin and triplet pregnancies with TTTS treated with FLA.