

## Neonatal survival following laser therapy in monochorionic twins complicated by TTTS

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### Objective

To compare neonatal survival in monochorionic twin pregnancies complicated by isolated twin-twin transfusion syndrome (TTTS) with and without selective fetal growth restriction (sFGR) after laser therapy.

### Methods

This is a retrospective cohort study of all cases of monochorionic diamniotic twins complicated by TTTS that underwent fetoscopic laser photocoagulation (FLP) at the Hospital Italiano de Buenos Aires between January 2012 and December 2022. We compare survival rates between those pregnancies with and without concomitant sFGR. The primary outcome was defined as dual survival 28 days after delivery. The secondary outcomes were survival of at least one twin and donor demise. Triplet pregnancies were excluded. sFGR was defined according to the new Delphi consensus definition.

### Results

A total of 177 patients were included in the study, of whom 59 (33%) had isolated TTTS compared to 118 (67%) cases with concomitant sFGR. Mean gestational age at treatment and birth did not differ between both groups. The TTTS-only group had 32% cases of Quintero stages III and IV versus 70% cases in the TTTS + sFGR group. Dual survival in the TTTS-only group was 67.8% (40/59) compared to 49.1% (58/118) in the TTTS + sFGR group (p 0.01). There were no significant differences in the survival of at least one twin [86.4% (51/59) vs. 78.8% (93/118) (p 0.3)]. Donor demise occurred in 25% (15/59) of the TTTS-only group versus 43% (51/118) in the TTTS + sFGR group (p 0.02).

### Conclusion

MCBA pregnancies complicated by TTTS with associated sFGR treated with FLP had lower dual survival rates at the expense of the donor survival.