# Outcome of monochorionic twins complicated by selective fetal growth restriction: proposal of standardized management protocol

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## OBJECTIVE

- Selective fetal growth restriction (sFGR) complicates 10-15% of monochorionic (MC) twin gestations and optimal management remains unknown.
- Umbilical artery (UA) waveforms in sFGR fetuses are used to determine types (Type 1- normal, Type 2- persistently abnormal, Type 3- intermittently abnormal).
- We aimed to uncover outcomes of a standardized protocol for expectant management in sFGR with abnormal UA Doppler waveforms (types 2 and 3).

## METHODS

- A retrospective cohort analysis of MC twin pregnancies with sFGR managed and delivered at a single tertiary center (2015-2023).
- Excluded: patients undergoing laser. All were admitted at 26-28 weeks, received antenatal steroids, and underwent intensive monitoring (twice weekly ultrasounds, NST q8h).
- Clinical data were obtained from EMR.

## Table 1.

| Outcome | Type 2 sFGR (n=13) | Type 3 sFGR (n=20) | P-value |
|---|---|---|---|
| Birthweight (g) | 921 ± 317 | 1213 ± 479 | 0.09 |
| Birthweight (%tile) | 12.2 ± 8.0 | 14.5 ± 15.0 | 0.71 |
| 1 min Apgar | 5 [3, 8] | 7 [5, 8] | 0.14 |
| 5 min Apgar | 7 [7, 8] | 8 [8, 9] | 0.09 |
| Arterial cord pH | 7.29 ± 0.07 | 7.35 ± 0.05 | 0.09 |
| IVH (%) | 15 | 0 | 0.16 |
| RDS (%) | 46 | 65 | 0.29 |
| NEC (%) | 8 | 5 | 1.0 |
| ROP (%) | 8 | 5 | 1.0 |
| Neonatal death (%) | 8 | 0 | 0.41 |
| NICU LOS (days) | 108 ± 49 | 72 ± 74 | 0.11 |

## RESULTS

- 33 pregnancies with sFGR and abnormal UA Dopplers were managed. 13 (39%) were Type 2, 20 (61%) were Type 3.
- No difference in GA at diagnosis. GA at delivery was higher in Type 3 (31 [29,33] vs 29 [27,31] weeks, *p*=0.03).
- Non-reassuring fetal status was the most common indication for delivery in both groups (77% vs 65%).
- Neonatal outcomes were similar. One neonatal death occurred in Type 2.

## CONCLUSIONS

- In this cohort, Type 3 sFGR was associated with later gestational ages, but delivery for non-reassuring fetal status occurred in ~2/3 of patients. Neonatal survival >98%.
- Standardized inpatient protocol may be associated with favorable perinatal outcomes.