Gestational Age at Birth and outcome in Monochorionic Twins with Different Types of Selective Fetal Growth Restriction

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Objective
This review aims to assess the gestational age at birth and perinatal outcome (intrauterine demise (IUD), neonatal mortality and severe cerebral injury) in monochorionic (MC) twins with selective fetal growth restriction (sFGR), according to Gratacós classification based on umbilical artery Doppler flow patterns in the smaller twin.

Methods
This was a systematic literature reviews including twelve articles reporting on gestational age at birth in selective fetal growth restriction.

Results
Gestational age at birth varied from 33.0-35.0 weeks in type I, 27.8-32.4 weeks in type II, and 28.3-33.8 weeks in type III. IUD rate differed from 0-4% in type I to 0-40% in type II and 0-23% in type III. Neonatal mortality rate was between 0-10% in type I, 0-38% in type II, and 0-17% in type III. Cerebral injury was present in 0% of type I, 2-17% of type II and 0-4% of type III cases.

Conclusion
The timing of delivery in sFGR varied substantially among studies, particularly in type II and III. The quality of evidence was moderate due to heterogenous study populations with varying definitions of sFGR and perinatal outcome parameters, as well as a lack of consensus on the use of the Gratacós classification, leading to substantial incomparability. Our review identifies the urgent need for uniform antenatal diagnostic criteria and definitions of outcome parameters.