

Selective foetal growth restriction in dichorionic twin pregnancies: clinical evolution, obstetric and perinatal outcomes

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Objective. Selective foetal growth restriction (sFGR) is a common complication of twin pregnancies, linked to higher perinatal risks. The aim of this study is to evaluate the incidence, obstetric and perinatal outcomes, and clinical evolution of sFGR in dichorionic twin pregnancies.

Materials and Methods. A retrospective study was conducted on dichorionic twin pregnancies from January 2017 to June 2023 at Careggi University Hospital in Florence. Major foetal malformations, double FGR, early miscarriages, or selective reduction were excluded. sFGR was diagnosed using Delphi criteria, and disease progression was measured by the time between diagnosis and ultrasound detection of foetal flowmetric abnormalities.

Results. Among 453 DC twin pregnancies, 11.9% were classified as sFGR: 33 (7.3%) were early onset (< 32 weeks), and 21 (4.6%) late-onset sFGR.

Compared to the non-sFGR group, the sFGR group had a significantly higher incidence of hypertensive disorders (22.2% vs 8.2% $p = 0.001$), stillbirth (9.2% vs 0.25% $p \leq 0.001$), preterm birth < 34 weeks (35.2% vs 11.3% $p \leq 0.001$), low birth weight (1,480 g \pm 500 vs 2,275 g \pm 417 $p < 0.001$), admission to NICU (55.5% vs 24.6% $p \leq 0.001$) and neonatal death (1.85% vs 0.25% $p \leq 0.001$).

Disease progression was seen in 72.2%, with a longer progression time (5 vs 2 weeks) and higher progression rate (46.6% vs 25.6%) in early sFGR.

Conclusions. sFGR in DC twin pregnancies is associated with an increased risk of foetal and neonatal complications. Early sFGR carries a higher risk of clinical deterioration and complications, like stillbirth (12.2% vs 4.76%, $p < 0.001$) and NICU admission (69.7% vs 33.3%, $p < 0.001$), compared to late sFGR.