

## Maternal, perinatal and neonatal outcomes of triplet pregnancies according to chorionicity: our 13-year experience at Careggi University Hospital in Florence, Italy

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**Objective.** Triplet pregnancies are associated with a higher risk of foetal and maternal morbidity and mortality compared to twins and singletons. Chorionicity has been proposed as a major determinant of perinatal and maternal outcomes in triplet pregnancies, although further evidence is needed to clarify the extent and real influence of this factor. Thus, this study aimed to evaluate the effect of chorionicity on adverse maternal, foetal, and neonatal outcomes in triplet pregnancies.

**Materials and Methods.** A retrospective observational study was carried out on triplet pregnancies delivered between 2010 and 2023, in Careggi University Hospital in Florence. A total of 79 pregnant women and 215 newborns were analysed. Of these triplet pregnancies, 32.9% were non-trichorionic. We analysed maternal characteristics and obstetric, foetal, perinatal, and neonatal complications based on their chorionicity. More-

over, we conducted several multivariate logistic regressions to deepen our understanding of the most relevant complications that can be associated to chorionicity.

**Results.** Pregnant women with non-trichorionic triplet pregnancy face a higher risk of giving birth at a lower gestational age, presented greater prematurity under 34 weeks, and more probability to have post-partum haemorrhage and foetus with IUGR. Newborns with a non-trichorionic component had a lower birth weight, greater probability of birth weight under 2500 g, and an APGAR score below 7 at 1st min, more RDS, higher requirement of reanimation and NICU therapy, as well as the development of hypoglycaemia and Icterus.

**Conclusions.** Triplet gestations with a non-trichorionic component present a higher risk of obstetric, foetal, and neonatal complications.