Neonatal complications in preterm intrauterine growth restriction: a comparative analysis across gestational age groups

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DOI: 10.36129/jog.2024.S138

Objective. This study aims to assess neonatal complications in pregnancies with intrauterine growth restriction (IUGR) delivered before 34 weeks gestation, compared to non-IUGR pregnancies across three gestational age groups.

Materials and Methods. A retrospective study was conducted on 159 pregnancies delivered between 24+0 and 33+6 weeks gestation, divided into three groups based on gestational age: 24+0 to 27+6 weeks, 28+0 to 31+6 weeks, and 32+0 to 33+6 weeks. Neonatal complications such as respiratory distress syndrome (RDS), bronchopulmonary dysplasia (BPD), peri-intraventricular haemorrhage (PIVH), necrotizing enterocolitis (NEC), and retinopathy of prematurity (ROP) were compared between IUGR and non-IUGR groups using statistical analysis.

Results. Neonatal complications were more frequent in the IUGR group across all gestational ages. RDS was present in nearly all IUGR neonates, with 100% affected in the 24+0 to 27+6 weeks group, and 78.8% in the 28+0 to 31+6 weeks group. IUGR was also associated with significantly higher rates of ROP in the 28+0 to 31+6 weeks group (66.6% *vs* 0%, p = 0.013). While BPD, PIVH, and NEC were more common in the IUGR group, statistical significance was not reached.

Conclusions. IUGR is strongly associated with increased neonatal complications, particularly respiratory distress syndrome and retinopathy of prematurity.The risk of adverse neonatal outcomes remains significant across all gestational ages, emphasizing the need for early detection and targeted intervention to improve neonatal survival and reduce morbidity in IUGR pregnancies.