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Editorial

Obstetric complications during pregnancy and delivery are significant contributors to neonatal morbidity and mortality worldwide. These complications often necessitate admission of neonates to the Neonatal Intensive Care Unit (NICU), where specialized care is provided to stabilize and manage vulnerable infants. Understanding the relationship between maternal complications and neonatal outcomes is essential for improving both obstetric and neonatal care.

Common obstetric complications associated with NICU admission include preeclampsia, gestational diabetes mellitus, premature rupture of membranes, placental abruption, placenta previa, and preterm labor. Maternal infections, prolonged labor, and fetal distress during delivery may also contribute to adverse neonatal conditions. These complications can impair placental function, reduce oxygen and nutrient delivery to the fetus, and increase the risk of preterm birth or intrauterine growth restriction.

Preterm birth remains one of the leading causes of NICU admission. Infants born before 37 weeks of gestation often require intensive care due to immature organ systems, particularly the lungs and brain. Respiratory distress syndrome, neonatal sepsis, hypoglycemia, and intraventricular hemorrhage are among the most common conditions treated in the NICU following complicated pregnancies. Additionally, infants born to mothers with gestational diabetes may experience complications such as macrosomia, hypoglycemia, and respiratory difficulties.

Neonatal outcomes following NICU admission vary depending on the severity of the obstetric complication, gestational age at birth, and the timeliness of medical intervention. While many infants recover with appropriate care, some may face long-term consequences, including neurodevelopmental delays, chronic lung disease, or growth challenges. Early identification and management of maternal complications during pregnancy can significantly reduce the risk of adverse neonatal outcomes. In this special issue, Salasidou et al. confirmed that prematurity continues to drive NICU admissions and adverse neonatal outcomes, with gestational age and birthweight being the most important predictors of survival.

Improved antenatal care, timely obstetric interventions, and advancements in neonatal intensive care have substantially increased survival rates among high-risk newborns. Multidisciplinary collaboration between obstetricians, neonatologists, and nursing staff plays a crucial role in optimizing both maternal and neonatal health outcomes. Continued research and preventive strategies are essential to further reduce complications and improve the quality of life for infants requiring NICU care.