

## **Comparison of maternal and fetal outcomes in pregnancies with Preterm Premature Rupture of Membranes (PPROM) terminating in 34<sup>th</sup> and 36<sup>th</sup> gestational weeks: Clinical Trial**

**Background and objective:** Preterm premature rupture of membranes (PPROM) complicates 1–5% of all pregnancies and is associated with 30% of all preterm deliveries and with significant perinatal morbidity and mortality. The primary risks to the fetus after PPRM are prematurity and ascending infection. It is generally agreed that women with PPRM should be expectantly managed at least until 34 completed weeks of gestation. Nonetheless, the choice between active management and expectant management from 34 to 36 weeks of gestation remains highly controversial. This study sought to compare maternal and neonatal outcomes in PPRM cases undergoing pregnancy termination at 34 or 36 gestational weeks.

**Methods & Materials:** A total of 40 pregnant females with PPRM were randomized in two 20-patient groups, undergoing pregnancy termination at either 34 gestational weeks (group A) or 36 gestational weeks (group B). Maternal outcome variables were delivery-related complications, the need for C/S, chorioamnionitis, endometritis, sepsis and mortality. Neonatal outcome variables were preterm delivery/abruption, umbilical cord prolapse, NICU admission, respiratory distress, necrotizing enterocolitis, and mortality.

**Results:** The two groups were comparable in terms of demographic data and variables related to past medical history. CS was indicated in 10% of patients in group A and no patient in group B ( $p=0.49$ ). Chorioamnionitis developed in 5% of patients in each group. No other mother-related complications were recorded by term. The birth weight of neonates in group A was between 1500-2500 gr in 90%, between 2500-3500 in 5%, and between 3500-4500 in 5%. The corresponding rates were 5%, 95% and 0% in group B, respectively ( $p<0.001$ ). The Apgar was of 3-5 in 5%, of 5-7 in 30%, and of 7-10 in 65% of neonates in group A. The relevant percentages were 5%, 5% and 90% in group B, respectively ( $p=0.13$ ). The rate of NICU admission was significantly higher in group A than in group B (65% vs. 10%;  $p<0.001$ ). The two groups were comparable for the remaining variables indicative of neonatal outcome.

**Conclusion:** The termination of pregnancy at 34 gestational weeks may increase neonatal morbidity and the need of NICU stay in comparison with that at 36 gestational weeks.

**Keywords:** Premature Rupture of Fetal Membranes, Newborn, Outcome Assessment.