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Expectant management of PPROM before 22 weeks: impact on neonatal mortality and severe morbidity

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Objective

Preterm premature rapture of membranes (PPROM) in the previability period is considered a significant risk factor for perinatal mortality and, above all, morbidity. Given this context, many women decide not to continue their pregnancy. High-frequency ventilation, surfactant and nitric oxide inhalation used since the turn of the millennium in neonatal intensive care have positively influenced neonatal outcomes. Only limited data are available to analyse conservatively managed cases of PPROM before 22 weeks.

Methods

We retrospectively compared the outcome of newborns with PPROM before 22 weeks with matched controls of non-PPROM newborns born at the same gestational age between 01/2010 and 12/2020 in a single perinatal center. We compared neonatal mortality and morbidity (need for mechanical/high-frequency oscillatory ventilation, bronchopulmonary dysplasia, patent ductus arteriosus, intraventricular haemorrhage, necrotizing enterocolitis, retinopathy of prematurity) of both groups.

Results

We included 44 preterm live-born infants per group in the study. Mean (SD) gestational week and birth weight were 27.2 weeks (3.7) and 1002 g (535), respectively. The median (IQR) week of PPROM was 20 weeks (18; 21) and median length of expectancy was 41 days (28;78). Mortality did not differ between the two groups (4 deaths in non-PPROM vs 6 deaths in PPROM before 22w). The PPROM group had higher incidence of respiratory morbidity, but other than that, we found no significant differences in neonatal morbidity between the two groups.

Conclusion

The outcomes of newborns with PPROM in the early second trimester in our centre were better than previously reported. This provides the rationale for further prospective studies in pregnancies with previable PPROM.