

Expectant management of PPROM until 36 weeks reduced neonatal morbidity without increasing chorioamnionitis

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Objective

- The ideal timing of delivery for PPROM remains unclear
- We capitalized on a unique hospital PPROM management guideline to investigate outcomes of immediate delivery (ID) of PPROM at 35 wks compared to expectant management (EM) of PPROM until 36 wks

Study Design

- Retrospective cohort study of singleton non-anomalous pregnancies admitted with PPROM > 20 wks from 1/1/2011-5/1/2021.
- Hospital guidelines for PPROM: Delivery at 35 wks (ID) from 2011-2016 and 36 wks (EM) from 2017-2021
- Primary outcome was composite neonatal morbidity: need for respiratory support, culture positive sepsis, or antibiotic administration for > 72 hrs
- Secondary outcomes included NICU admission, length of NICU stay, and maternal infection

Results

- Total of 232 mother-infant dyads: 137 (59%) ID at 35 wks and 95 (41%) EM until 36 wks
- Composite neonatal outcome was higher in those managed with ID compared to EM (44.5% vs 24.2%; RR 1.4, 95% CI 1.2, 1.7) (Table 1)
- This remained significant after adjusting for differences in betamethasone (aOR 2.1, 95% CI 1.1, 4.1)
- ID had a 2.8 times increased risk of NICU admission compared to EM (95% CI 1.7, 4.8) as well as a longer NICU stay than EM (median 7 days vs 1 day, $p < 0.001$) (Table 1 and Figure 1)
- No differences in neonatal sepsis ($p=0.59$), maternal chorioamnionitis ($p=0.38$) or endometritis ($p=0.25$) (Table 1 and 2)
- There were no cases of stillbirth

Conclusion

- Increased composite neonatal morbidity and NICU admission when PPROM was managed with ID at 35 wks compared to EM until 36 wks
- EM until 36 wks did not increase maternal or neonatal infection
- We encourage dissemination of perinatal outcomes following expectant management of PPROM in the late preterm period

Planning delivery at 35 weeks in PPROM leads to higher composite neonatal morbidity and NICU admission rates when compared to planning delivery at 36 weeks.

Delaying delivery until 36 weeks did not increase infectious complications or stillbirth.

Table 1: Neonatal Outcomes

	ID at 35 wks (n=137)	EM at 36 wks (n=95)	p-value
Composite Outcome	61 (44.5%)	23 (24.2%)	0.002
Neonatal sepsis	1 (0.7%)	0	0.59
NICU Admission	126 (92%)	60 (63.2%)	<0.001
NICU Length of Stay	7 (median)	1	<0.001

Figure 1: NICU Length of Stay

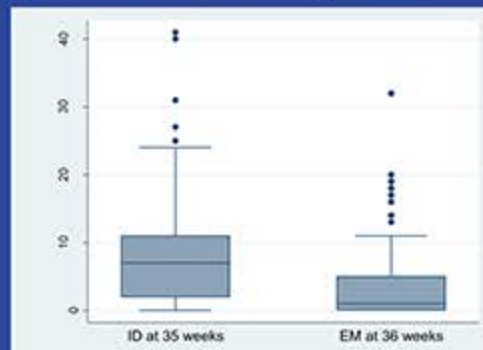


Table 2: Maternal Outcomes

	ID at 35 wks (n=137)	EM at 36 wks (n=95)	p-value
Clinical Chorioamnionitis	18 (13.2%)	9 (9.5%)	0.38
Histologic Chorioamnionitis	47 (35.6%)	29 (34.9%)	0.92
Endometritis	6 (4.4%)	1 (1%)	0.15
Maternal Sepsis	0	0	

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