

## Immediate Induction of Labour in Term PROM-Maternal and Neonatal Outcome

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### Abstract:

**Aim:** To study the maternal and neonatal outcome of immediate induction of labour in term pre labour rupture of membranes.

**Methods:** Prospective observational study was conducted in Government Rajaji Hospital, Madurai, over a period of 4 months (August 2022 to November 2022). 281 low risk mothers with singleton pregnancy, cephalic presentation, term PROM were included in the study. Various maternal and neonatal outcomes were analysed.

**Results:** 94.6% (266) of cases delivered within 12 hours of induction. 82.4% (234) delivered by labour natural, 17.6% (47) needed LSCS, 7.8% of the babies needed NICU admissions. In our study there was nil maternal sepsis, nil maternal and neonatal mortality.

**Conclusion:** Immediate induction of labour in term PROM reduces the PROM delivery interval and reduces the incidence of neonatal and maternal sepsis with good maternal satisfaction.

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### Introduction

Term Prelabour rupture of membranes is defined as rupture of membranes prior to the onset of labour at (or) after 37 weeks of gestation. PROM cases require careful evaluation and early induction to reduce the neonatal sepsis and asphyxia. Immediate IOL in term PROM reduce the time from PROM to delivery, NICU admissions, Neonatal Sepsis, duration of hospital stay, without increasing the caesarean delivery rate. It is also cost effective in low resource settings by reducing the rate of NICU admission. Expectant management may be associated with increased risk of maternal and neonatal sepsis and increased Caesarean section rate.

### Materials and Methods

This prospective observational study was conducted in a tertiary care, academic institution Government Rajaji Hospital, Madurai. From August 2022 to November 2022.

Low risk term PROM cases with non-anomalous singleton pregnancy, cephalic presentation, reassuring NST, no signs of chorioamnionitis were included in the study group. After initial evaluation with thorough history, physical examination and basic investigations immediate Induction of Labour was done. If Bishop score  $\leq 5$ , PGE2 gel was used. Oxytocin IV infusion used in cases with Bishop Score  $> 6$ .

Primary outcomes analysed were rate of vaginal delivery, induction to delivery interval, LSCS rate, number of NICU admissions and neonatal sepsis.

**Results**

Total number of patients admitted in labour unit from August 2022- November 2022 was 4820. Out of which, 281 term PROM, low risk mothers were included in the study.

244(86.8%) cases with Bishop score  $\leq 5$  were induced with PGE<sub>2</sub> gel. 37(13.16%) cases with Bishop score  $> 6$  were induced with oxytocin infusion. Progress of labour was monitored as per WHO guidelines. 114(40.5%) cases needed oxytocin IV infusion after 6 hours of PGE<sub>2</sub> gel induction, for acceleration of labour. (7.5%) 20 cases needed repeat PGE<sub>2</sub> gel induction after 6 hours of initial induction due to Bishop score  $< 5$ .

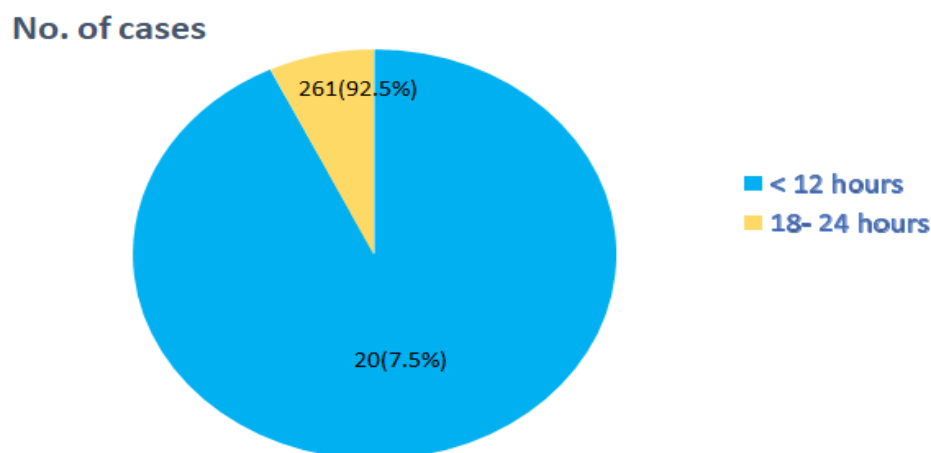
**Methods of Induction**

**Table 1:**

PGE <sub>2</sub> Gel	244	86.8%
Oxytocin Infusion	37	13.16%
PGE <sub>2</sub> Gel + Oxytocin for acceleration	114	40.5%
Repeat PGE <sub>2</sub> Gel after 6 hours	20	7.5%

**Induction Delivery Interval:** 261 (92.5%) cases delivered within 12 hours of induction, (7.5%) 20 cases delivered in 18 – 24 hours of induction.

**Induction Delivery Interval**



**Figure 1:**

**Mode of Delivery**

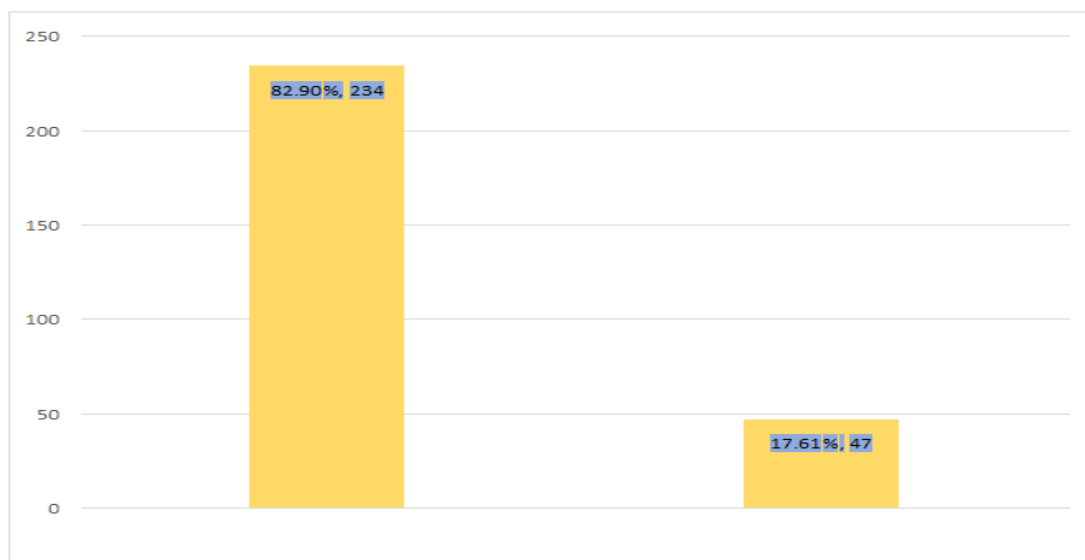
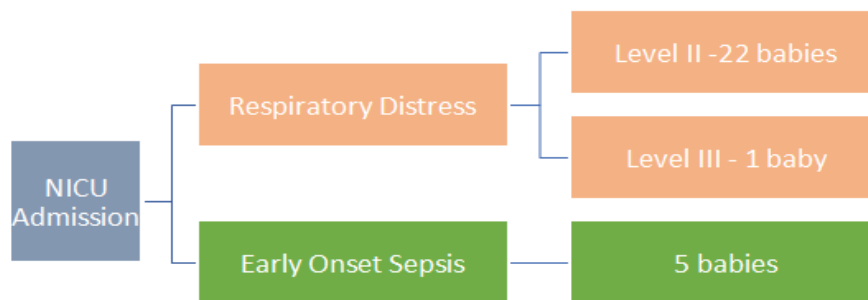


Figure 2:

234 (82.9%) cases delivered by vaginal delivery (LN+IVD). (17.61%) 47 cases delivered by LSCS. Indication for LSCS in all cases was fetal distress. In view of tertiary care hospital, referral cases with history of prolonged PROM at the time of admission itself are the main reason for increased risk of fetal distress.

Out of 281 babies, 22(7.8%) neonates were admitted to NICU (Level II), 1 (0.3%) needs Level III care due to respiratory distress, 5(1.7%) babies had neonatal sepsis. All (100%) babies were discharged in good condition. Nil perinatal mortality.

**NICU Admission**



**Duration of NICU Admission**

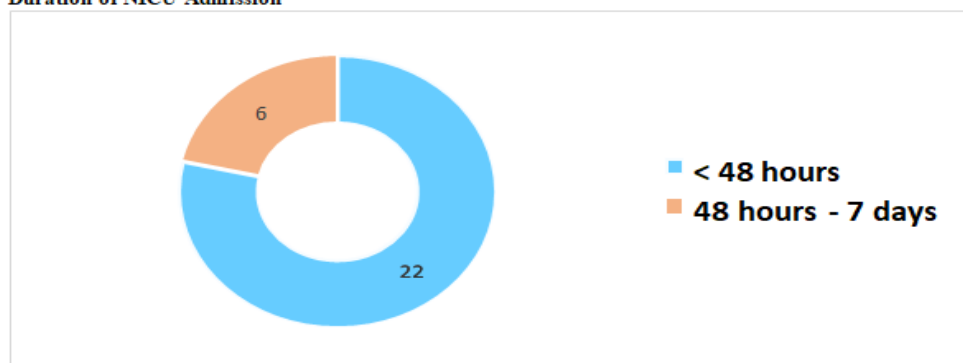


Figure 3:

### Maternal Outcome

8(2.8%) patients had atonic PPH, and was medically managed, Nil cases of endometritis. As our centre is referral centre, IV antibiotics (Inj. Ampicillin 1g IV TDS (or)

Inj. Ceftriaxone 1g IV BD) were given till delivery and oral antibiotics (c. Amoxycillin 500mg TDS) given for 1 week.

### Conclusion

As expectant line of management in term PROM is associated with increased risk of neonatal sepsis and NICU admissions. Immediate IOL is the ideal management in term PROM. It can also be cost-effective by reducing NICU admissions and duration of hospital stay.

### References

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