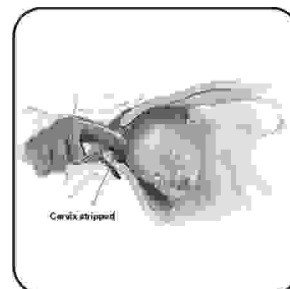


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# MANAGEMENT PRELABOUR RUPTURE OF THE MEMBRANES AT TERM; INDUCTION OF LABOUR COMPARED WITH EXPECTANT

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**ABSTRACT...** [javid.rehman@yahoo.com](mailto:javid.rehman@yahoo.com) **Objective:** To find out maternal and fetal outcome in induction of labour compared with expectant management for prelabour rupture of membranes at term. **Design:** Open randomized comparative study. **Setting and period:** Gynae Unit- II Services Hospital, from 1<sup>st</sup> April 2007 to 30 September 2007. **Patient and methods:** 100 patients at > 37 weeks with ruptures membranes with no contraindication to vaginal delivery were enrolled in the study. 50 patients were in the expectant group while 50 patients were in the induction group. **Results:** Both groups had the same general characteristics but the Misoprostol group had a significantly shorter latency period (10-16 hour Vs 20-24 hours), shorter period of hospitalization, lesser LSCS rate (24% Vs 34%) lesser need of augmentation (40% Vs 62%), choroamnionitis (3% Vs 7.8%), and postpartum fever (1% Vs 1.8%) when compared with expectant group. Rate of infected wound after LSCS were compared in induction and expectant groups (2.2% Vs 2.6%), also there was no difference between them regarding neonatal morbidity and nursery admission. **Conclusion:** So it was concluded that there was slightly high maternal complications in expectant group but no long-term maternal morbidity. Both groups have no effect on neonatal morbidity and mortality however the duration between PROM and delivery effect the neonatal admission in nursery and antibiotic requirements.

## INTRODUCTION

PROM is defined as rupture of membranes that occurs at term. It occurs in 8% of pregnancies. 50% of patients deliver within 5 hours of membrane rupture and 95% of patients deliver within 28 hours<sup>1</sup>. As the time between the rupture of the membranes and the onset of labour

increases, so may the risk of maternal and fetal infection. For this reason, many physicians recommend that labour be induced if the pregnancy is at term and labour does not begin spontaneously shortly after the membranes rupture<sup>2,3</sup>.

Other believes that waiting for labour to begin spontaneously is preferable for mothers if there is no evidence of fetal or maternal compromise, since the risk of cesarean section may be lower<sup>4,5</sup>. There is limited information about which about which approach is better<sup>6,7</sup>.

For labour that is induced, the timing of the induction is controversial. Indeed, the decision to induce labour often depends more on the convenience of the physicians, nurses, or midwives than on the actual time that has elapsed after rupture of the membranes<sup>5</sup>. If labour is induced, the method of induction is usually by intravenous administration of oxytocin. More recently, prostaglandins, followed by an infusion of oxytocin if necessary, have been used. It is not known which the better method is<sup>8</sup>. A meta-analysis published in 2005 found that misoprostol was as safe and effective as oxytocin for induction of patients with PROM<sup>9</sup>.

The Term Prelabour Rupture of the Membranes (TERMPROM) study was undertaken to determine whether a practice of inducing labour in woman with Prelabour rupture of the membranes at term is preferable to a practice to waiting for labour to begin spontaneously if there is no evidence of fetal or maternal compromise (expectant management)<sup>14</sup>.

Our objective was to compare the two approaches, when labour was induced with prostaglandin (misoprostol) or when left expectant management for 24 hours.

## PATIENTS AND METHODS

The study was conducted in Gynae Unit-II Services Hospital, Lahore for duration of 6 months from 1<sup>st</sup> April 2007 to 30 September 2007. It was an open randomized comparative study.

All the patients who had ruptured membranes at  $\geq 37$  weeks gestation and single fetus with cephalic presentation are included in this study. All the patients having ruptured membranes at  $< 37$  weeks and indication for elective LSCS are excluded from the study.

Ruptured membranes were confirmed by clinical examination.

Total 100 patients were included in this study. 50 patients with expectant management and 50 patients with misoprostol (oral route). Ages of patients varied from 22 to 36 years with average age-Parity ranged from primigavida to para four.

## RESULTS

There was no significant difference of outcome between expectant and induction group but latency period was shortened in induction group from 10–16 hours to 20–25 hours in expectant management.

There was shorter hospital stay with induction group than expectant management. The rate of cesarean section with misoprostol was 24%, caesarean section was done for various indications, but majority i-e. 14% were due to fetal distress. But with expectant management cesarean section was slightly higher i-e. and indications are mostly other fetal distress that is failure to progress.

There was less requirement of augmentation with oxytocin in induction group (40%), than expectant management (62%). The requirement of analgesia during labour was same in induction and expectant group.

Clinical Chorio-amnionitis was less likely to develop in induction group i-e. 3% than expectant group where it is 7.8%. The rate of postpartum fever ( $> 38^{\circ}\text{C}$ ) in induction group was less than 1% and in expectant group it is 1.8%.

The rate of infected wound after LSCS both group were comparable i.e. in induction group (2.2%) Versus expectant group (2.6%) so the duration of hospital stays after LSCS in both groups remains the same.

Antibiotics were prophylactic ally started in both group but the requirement of antibiotics in induction group was less depending upon the hospital stay, vaginal

examination and less induction delivery interval than in the expectant management group.

PPH was experienced in 3% of the patients in the study with no difference among the two groups. All the babies who delivered by SVD, or LSCS were assessed by pediatrician. Only 2% of babies delivered had A/S < 5 at 5 minutes and required active resuscitation and required admission in nursery. They remained oxygen dependent for 5-7 days. Antibiotics were given but cultures were negative. The cause identified in these cases was birth asphyxia. The outcome was comparable in both induction as well as expectant group.

One baby died of multiple congenital abnormalities that was undiagnosed as patients was unbooked. She was in expectant group of management and was delivered by SVD.

Remaining babies have average A/S between 7 & 9 at 5 minutes 20% were admitted in nursery to tachypnea and given antibiotics for 5 days. Outcome was comparable in both groups. No significant difference was observed in neonatal morbidity and nursery admission between both groups.

## DISCUSSION

PROM at term is associated with spontaneous onset of labour with is 24 hours in most of the cases. Spontaneous onset of labour is associated with prolonged stay in hospital this is the same as reported on other studies. The latency period ranges from 20-25 hours in expectant group versus 10-16 hours in induction group. It is very similar to a study conducted in Brazil<sup>10</sup>.

Rate of caesarean section was 24% in induction group and 34% in expectant group. This is also confirmed in other studies 20% Vs 30.7%<sup>10</sup>, the most common indication for LSCS in induction group in fetal distress, while in expectant group it is fetal distress in our study. But it was not proved in a study conducted in Rawalpindi, the majority LSCS were done due to failed induction in induction group and due to fetal distress in expectant

group<sup>11</sup>.

In our study the requirement of augmentation with oxytocin in induction group was 40% and in expectant management group (62%), this while the above study reported 57.6% Vs 76%<sup>11</sup>.

Clinical chorioamnionitis observed in our study was 3% in induction group Vs 7.8% in expectant group. Hence other results are comparable to those reported in the literature i.e. 2% of expectant group in a study conducted in Services Hospital, Lahore<sup>12</sup>. In another study it is 4% VS 8%<sup>13</sup>

Postpartum fever > 38° C in our study was 1% in induction group Vs 1.8% in expectant group. But was comparable in both groups (2.5%) in other study<sup>11</sup>.

Febrile morbidity was lower in induction group (9.5%) Vs expectant group (25%) in another study<sup>14</sup>. Wound infection were comparable in both groups in our study i.e. induction (2.2%) VS expectant (2.6%). While in another study it was 3% PPH was seen in 3% of our patients while it was seen in 7%<sup>12</sup>.

Neonatal admission were 20% in our study though they have 4 A/S 7-9 after 5 minutes. They required antibiotics, even though cultures were negative. ICU admission were 8% in another study but neonatal infection were only 1%. In another study neonatal sepsis was observed in both groups but was not significant different (4% Vs 5.3%)<sup>12</sup>. No significant difference observed in induction and expectant requirement of antibiotic<sup>13</sup>.

It was concluded from our study that though the induction of labour in case of PROM at term shortens the latency period, shorts hospital stay, less requirement of oxytocin for decrease rate of LSCS. Clinical chorioamnionitis, postpartum fever were also less. But the rate of infected wound, PPH, was comparable in both groups. Neonatal admissions were less in induction group but requirement of antibiotics were comparable.

## CONCLUSION

So it was concluded that there was slightly high maternal complications in expectant group but no long-term maternal morbidity. Both groups have no effect on neonatal morbidity and mortality however the duration between PROM and delivery effect the neonatal admission in nursery and antibiotic requirements.

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