

ROLE OF INDUCTION OF LABOUR VERSUS EXPECTANT MANAGEMENT AT TERM IN PRE LABOUR RUPTURE OF MEMBRANES

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ABSTRACT

Background: Pre-labour rupture of membranes (PROM) is defined as spontaneous leakage of amniotic fluid prior to the onset of labour. It is further categorized into preterm PROM (PPROM) when gestational age <37 weeks and PROM when it is >37 weeks. **Objective:** To compare the induction versus expectant management in the management of PROM in terms of maternal and fetal outcome. **Material and Methods:** Study Design: Randomized controlled trial. Setting: Department of obstetrics and Gynaecology, Sheikh Zayed Medical College/Hospital, Rahim Yar Khan from 15th December 2011 to 14th August 2012. A total of 158 patients were included in the study divided in two groups A & B, each having 79 patients. Group "A" were treated with expectant management and group "B" underwent induction of labour with prostaglandin E2. The data was entered and analyzed in SPSS version 10. **Results:** Mean PROM to delivery interval in Group "A" was 19.65 ± 2.38 hours and in Group "B" it was 15.16 ± 2.79 hours. In Group "A" 48 (60.7%) patients ended up with normal vaginal delivery 13 (16.5%) had instrumental and 18 (22.8%) had cesarean section. In group "B" 13(16.4%) have normal vaginal delivery and 35(44%) have cesarean section. In Group "B" 13 (16.4%) have normal vaginal delivery, 31 (39.3%) had instrumental delivery and 35 (44.3%) ended up in . Regarding chorioamnionitis 15 (19%) in Group "A" and 8(10.1%) in Group "B" had this complication. In Group "A" 11(14%) and in Group "B" 8(10.1%) developed puerperal pyrexia. 3 neonates in Group "A" had APGAR score <7 at 5 minutes (03.7%) while no neonate have such problem in Group "B". **Conclusion:** Expectant management is better option for women who presented with PROM at term with good fetal and maternal outcome.

Key Words: PROM, Expectant management of PROM, Induction of labour.

INTRODUCTION

Pre labour rupture of membranes (PROM) is used appropriately when referring to a patient who is beyond 37 weeks of gestation and presented with spontaneous rupture of membranes and is not in labour.¹ There are two management options in cases of PROM, either induce or wait for spontaneous labour to occur.² Some favour the expectant management while others prove more success in induction of labour.^{2,3}

The rationale behind the expectant approach is to allow more time for cervical ripening and to enhance the chances of vaginal delivery. However, an increase in time gap between rupture of membranes and delivery increases the risk of fetal distress, maternal infections, neonatal sepsis and admissions to neonatal intensive care unit.³ On the other hand planned intervention may increase the risk of ascending infection while vaginal application of prostaglandins.⁴ It is also associated

with increased risk of cesarean section and instrumental delivery.³

The main objective of obstetrician for women with suspected PROM is the correct diagnosis and the management of delivery that gives high rate of successful vaginal deliveries with reduced maternal & neonatal infections.⁵ This study was conducted to compare the two management options i.e expectant versus induction in PROM at term and find out better management option for the women presenting with PROM, so that better one will be used in future in such cases.

MATERIAL AND METHODS

A randomized controlled trial, was conducted on a total of 158 cases (79 in each group) with PROM reported in labour room of Sheikh Zayed Hospital, Rahim Yar Khan, during 15th December 2011 to 14th August 2012. All of them fulfilled inclusion criteria i.e. singleton gestation, cephalic presentation, period of gestation between 37-42 weeks confirmed through earliest USG. Patients with chorioamnionitis at presentation, fetal distress, previous scar & congenital anomalies of the fetus were excluded from the study. Patients were divided into two groups. Group "A" undergone expectant management with antibiotic cover. Pulse, temperature, uterine tenderness and color of liquor

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was observed at 4 hourly interval for 24 hours. In Group “B” induction was done with prostaglandin E2. Mode of delivery was noted in both groups. Maternal outcome was determined in term of PROM to delivery interval, chorioamnionitis and puerperal pyrexia. Fetal outcome was taken in terms of APGAR score. All this data was collected on predesigned proforma and analyzed by SPSS version 10.0.

Quantitative variables were subjected to “t” test and Qualitative were analyzed with Chi-square test. Confounding factors like age, parity and mode of delivery were dealt through stratification of data to observe effect on outcome. P-value <0.05 was taken as significant.

RESULTS

A total of 158 patients were included in this study. Further they were divided into two groups. Group “A” (79 patients) were by expectant management while group “B” were induced with PGE₂.

In Group “A” 40(50.7%) patients in Group “B” 41(51.9%) patients had parity 5 - 6, while 19(24%) in Group “A” and 15(18.9%) in Group “B” had parity 3 - 4 . Mean parity was observed 4.59 ± 2.9 (Group “A”) and 4.2 ± 2.5 (Group “B”). As long as mean of PROM to delivery time was concerned, in Group “A” it was 19.6 ± 2.38 hours and in Group “B” it was observed 15.16 ± 2.7 hours (Table No. I).

In Group “A” 48(60.7%) ended up in normal vaginal delivery, 13 patients (16.5%) had instrumental delivery and 18 (22.8%) had cesarean section while in Group “B” 13(16.4%) had normal vaginal delivery, 31(39.3%) had instrumental delivery and 35 (44.3%) had cesarean section. There was significant difference of operative delivery between two groups. ($p < 0.05$).

Regarding chorioamnionitis in Group “A” 15(19%) patients and in Group “B” 8(10.1%) patients developed this complication (Table No. II). In Group “A” 11(14%) developed puerperal pyrexia, while in Group “B” 8(10.1%) developed this complication (Table No. III).

Table No. IV revealed that 3 (3.7%) neonate in Group “A” presented with APGAR score <7 at 5 minutes while none of neonate in Group “B” presented with this APGAR. Results are non-significant.

Table No. I: Comparison of PROM to delivery time (hour)

PROM to delivery interval (hour)	N	Mean	Standard deviation	P-value
Group A (Expectant)	79	19.65	2.38	< 0.001
Group B (Induction)	79	15.16	2.79	

Table No. II: Distribution of cases by chorioamnionitis

Chorioamnionitis	Expectant management (Group A)		Induction with PGE ₂ (Group B)	
	No.	%	No	%
Yes	15	19	08	10.1
No	64	81	71	89.9
Total	79	100	79	100

P value = 0.114

Table No. III: Distribution of cases by puerperal pyrexia

Puerperal pyrexia	Expectant management (Group A)		Induction with PGE ₂ (Group B)	
	No.	%	No.	%
Yes	11	14	08	10.1
No	68	86	71	89.9
Total	79	100	79	100

P value = 0.463

Table no. IV: Distribution of cases by Apgar score

Apgar Score	Expectant management (Group A)		Induction with PGE ₂ (Group B)	
	No.	%	No.	%
< 7	03	03.7	--	--
≥ 7	76	96.3	79	100
Total	79	100	79	100

P value = 0.080

DISCUSSION

Pre-labour rupture of membranes (PROM) is a major obstetrics problem. Its incidence is 7-15% of all pregnancies.⁶ In current clinical practice, there are two management options in cases of PROM either to induce or wait for spontaneous labour to occur.² In our study, the incidence of cesarean section and instrumental deliveries is much more in the induced group than that in the expectantly managed due to

failed progress of labour and fetal distress. These results are comparable with a study carried out by Zamzami et al in 2006.⁶ Another study conducted by Tasnim et al, in 2000 showed the same results as that of present study i.e. less number of cesarean section and instrumental deliveries in expectantly managed group.⁷ In this study, majority of the patients who were offered expectant management went into spontaneous labour. This was similar to another study carried out by saqib and malik in 2007 which also showed that 94% patients with PROM went in spontaneous labour in expectantly managed group and 2% developed sign of chorioamnionitis.⁸ Our study showed no significant difference in duration of labour, fetal distress, APGAR score and puerperal pyrexia between two groups and these results are comparable with the study by Zamzami in 2006.⁶ The only side effect which is more in expectantly managed group in current study was chorioamnionitis, however, it could be due to improper use of antibiotics, antibiotic resistance or repeated vaginal examinations, similar to study carried by Chaudhri and Naheed in 2002.⁹ Thus the results of my current study showed expectant management are better than induction in PROM at term and it has fewer cesarean section rate. Same emphasis was given by Wasim and Nabi Ullah in 2004, through their study which showed that expectant management is safe with excellent maternal & fetal outcome.³ So expectant management is better option for women who present with PROM at term with best maternal & fetal outcome and more chances of normal delivery.

CONCLUSION

This study concluded that expectant management is a better option for women who presented with PROM at term with good maternal and fetal outcome. Expectant management is safe, non-invasive with high rate of normal vaginal delivery and less caesarean section and instrumental deliveries.

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