

Fetomaternal Outcome in Expectant Management of Prom at Term

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ABSTRACT

Background: 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.

Aim: To determine maternal and fetal outcome of expectant management for 24 hours in patients of pre-labour rupture of membranes at term

Study Design: Descriptive case series.

Study Setting: The study was carried out in the Department of Obstetrics and Gynaecology Unit-I, Services Hospital, Lahore

Study duration: Study was conducted from 01-10-2009 to 31-03-2009.

Methods: Total 490 cases were included in this study. Patients were followed for 24 hours to see spontaneous onset of labour, development of chorioamnionitis and augmentation with syntocinon done or not, baby was followed as for admission to NICU, development of sepsis(temperature > 101°F) and convulsion. Data was entered and analyzed in SPSS ver.: 17.0., frequency and percentages were calculated for maternal and fetal outcome.

Results: Out of 490 patients, 75 (15.3%) were less than 20 year, 351 (71.7%) were between 21-30 while remaining 64 (13.0%) were between 31-40 years of age with mean age of 28.9±4.7 years. According to maternal outcome, spontaneous onset of labour had 282 patients (57.5%), clinical chorioamnionitis developed in 90 (18.3%) and augmentation was required in 300 patients (61.2%). Admission to NICU were 122 (24.9%) and neonatal sepsis developed in 37 (7.5%) neonates. Regarding gestational age, 397 (81.0%) patients had gestational age between 37-40 and 93 (19.0%) had 41-42 weeks of gestation

Conclusion: Expectant management in patients with ruptured membranes at term is safe and reduces the frequency of operative vaginal deliveries.

Keywords: PROM, Syntocinon, Spontaneous onset of labour

INTRODUCTION

Pre-labour rupture of membranes is defined as rupture of membranes that occurs at term but before the onset of labour. It occurs in approximately 8 percent of pregnancies; 50 percent of patients deliver within five hours of membrane rupture, and 95 percent of patients deliver within 28 hours.

The most significant risk of PROM is intrauterine infection, which increases with duration of rupture. Fetal risks include cord compression and ascending infection¹. Historically, two approaches have been used: induction or expectant management. Induction involves intervening to induce labour at diagnosis or within six to eight hours of rupture of membranes. Expectant management allows the onset of labour to occur spontaneously with no intervention.

There was no difference between the two management approaches in the rates of caesarean delivery or of operative vaginal deliveries. Fewer

women who underwent induction developed chorioamnionitis. Compared with expectant management, one case of chorioamnionitis will be avoided for every 50 women undergoing induction for PROM².

Benefits of early induction cause the time to short between admission and delivery and decrease the risk of maternal and neonatal infection³. But risk of failed induction and operative delivery increase. Patients treated expectantly for more than 24 hour have longer interval from rupture of membranes till delivery it causes dissatisfaction of the patient because of prolonged hospital stay and increases the risk of cord accidents⁴. Others believe that waiting for labour to begin spontaneously is preferable, if there is no evidence of fetal and maternal compromise as the risk of forceps deliveries and caesarean section is lower in spontaneous deliveries⁵.

In expectant management 84% patients went into spontaneous labour within 24 hours [6]. and clinical chorioamnionitis 12%⁷. there was need for augmentation 62% in patients of expectant

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management, 20% of the babies admitted in nursery¹. Neonatal sepsis was seen+ in 5.3% of babies of the patients management expectantly⁷.

The common indications of induction of labour include hypertensive disorders of pregnancy (42%), prolonged pregnancy (22%), premature rupture of membranes (21%), intrauterine death (9%) and others (4%) [8,9]. Now-a-days synthetic preparation of syntocinon is being used to induce labour and manage obstetric hemorrhage [10,11]. Expectant management of PROM for 24 hours is better and my study will emphasis this significance so the hazards of early induction could be avoided.

SUBJECTS AND METHODS

A descriptive case series was carried out in the Department of Obstetrics and Gynaecology Unit-I, Services Hospital, Lahore from 01-10-2009 to 31-03-2009. A sample of Sample size of 490 cases is calculated with 95% confidence level, 2% margin of error and taking expected percentage of neonatal sepsis i.e., 5.3% in expectant group through non probability purposive sampling technique. Pregnant mothers up to 40 years Gravida 5 and at term pregnancy 37-42 weeks confirmed by last menstrual earliest dating scan with single gestation on ultrasound examination and cephalic presentation on ultrasound examination were included in the study. A clinical evidence of chorioamnionitis (temperature of > 99°F uterine tenderness and fetal tachycardia) regular uterine contractions less than 10 minutes apart (patient in established labour) and pregnancy with medical illness (high blood pressure, diabetes mellitus, cardiac disease) assessed clinically and previously diagnosed cases and previous caesarean section, fetal distress (fetal tachycardia or bradycardia, non reactive CTG) and fetal anomalies (hydrocephalus, meningomyelocele etc) diagnosed on USG were excluded from the study. Patients were followed for 24 hours to see spontaneous onset of labour, development of chorioamnionitis and augmentation with syntocinon done or not, baby was followed as for admission to NICU development of sepsis temperature > 101°F and convulsion.

The collected data were entered to SPSS version 17.0 for analysis. The variables under study were include demographics (age) and variables i.e. spontaneous onset of labour, clinical chorioamnionitis, need for augmentation and neonatal admission to NICU and neonatal sepsis (Yes or No) was presented as frequency and percentages.

RESULTS

Out of 490 patients, 75(15.3%) were less than 20 year, 351(71.7%) were between 21 and 30 while remaining 64 (13.0%) were between 31-40 years of age with mean age of 28.9±4.7 years. Regarding gestational age, 397(81.0%) patients had gestational age between 37-40 and 93(19%) had 41-42 weeks of gestation. Primigravidae were 173(35.3%) and multigravidae were 317(64.7%). According to maternal outcome, spontaneous onset of labour had 282 patients (57.5%), clinical chorioamnionitis developed in 90(18.3%) and augmentation was required in 300 patients (61.2%). Admission to NICU were 122(24.9%) and neonatal sepsis developed in 37 (7.5%) neonates.

Table

Variables n= 490	Frequency	%age
Age (Year)	Mean SD= 28.9±4.7	
< 20	75	15.3
21-30	351	71.7
31-40	64	13.0
Duration of pregnancy		
37-40	397	81.0
41-42	93	19.0
Gravidity		
Primigravida	173	35.3
Multigravida	317	64.7
maternal outcome		
Spontaneous onset of labor	282	57.5
Clinical chorioamnionitis	90	18.3
Need for augmentation	300	61.2
Fetal outcome		
Admission to NICU	122	24.9
Neonatal sepsis	37	07.5

DISCUSSION

When a pregnancy reaches term, women normally expect labour to begin spontaneously, without medical or surgical assistance. However, for approximately 8% of women, the membrane rupture but labour does not begin spontaneously within the next few hours. Because the risk of maternal and fetal infection is known to increase with increasing duration. Between membranes rupture and delivery, artificial labour induction may be preferable for these women and their babies. Others believe that waiting for labour to begin spontaneously is preferable if there is no evidence of fetal or maternal compromise, because the risk of caesarean section may be lower. Because of limited information available it was difficult to determine which approach is better and thus a clinical trial was called for¹².

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, it is very similar to a study conducted d in Brazil¹³.

In present study, need of augmentation was in 61.2% patients. These results are comparable with the study carried out by Javaid et al, they demonstrated 62% patients of expectant management were in need of augmentation¹.

In another study by Chaudhri and Naheed showed the requirement of augmentation in expectant management in 76% patients⁷.

Javaid et al reported clinical chorioamnionitis was develop in 7.8% of patients of expectant group but in contrast clinical chorioamnionitis in current study was observed 18.3%¹. Similarly, clinical chorioamnionitis was observed in 8% of patients (expectant management) in a study conducted by Hannah et al⁹.

In our study, neonatal admissions to NIU were in 24.9% of neonates, these results are with agreement of a study by Javaid et al i.e. 20%¹. In another study, NIU admissions were 8% and neonatal sepsis was observed in 5.3% of expectant management [6], while in our study, neonatal sepsis developed in 7%.

In our study clinical chorioamnionitis was 18.3% which corresponds to 16% fever reported in expectant group in a study by Sumaira Y¹⁴ while Suneela K¹⁵ reports pyrexia in 5% of expectant management group.

CONCLUSION

Expectant management in patients with ruptured membranes at term is safe and reduces the frequency of operative vaginal deliveries. However, needs vigilant monitoring, puts a load on hospital staff.

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