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Provide the second

FETOMATERNAL OUTCOMES IN PREMATURE RUPTURE OF MEMBRANES AT TERM: A CASE CONTROL STUDY

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ABSTRACT Background- Premature rupture of membranes (PROM) affects approximately 10% of pregnant women. PROM, when unattended or mismanaged may lead to severe maternal and neonatal complications.

Methods-:100 patients who entered labour room at term with PROM were taken as cases and those with intact membranes as controls. Investigations are sent, and prophylactic antibiotics were given. Progress of labour, PROM delivery interval, method of induction, mode of delivery along with maternal and fetal outcomes, total duration of hospital stay was noted and compared with controls.

Results- In our study out of 100 cases studies, 27% accounted for respiratory distress syndrome, 13% septicemia in study group. while conjunctivitis, neonatal jaundice (hyperbilirubinemia) and intraventricular hemorrhage accounted for 2%, 3% and 2% each.

Conclusion-Poverty, rural area, lack of proper health services, lack of awareness are the main reasons for poor foetomaternal outcome in the patients with PROM.

KEYWORDS : Chorioamnionitis, Maternal and perinatal morbidity, PROM.

INTRODUCTION

Premature rupture of membranes (PROM) also known as prelabor rupture of membranes (PROM) is defined as spontaneous rupture of the membranes any time beyond 28th week of pregnancy but before the onset of labor. When rupture of membranes occur beyond 37th week but before the onset of labor it is called term PROM and when it occurs before 37 completed weeks, it is called preterm PROM (PPROM).¹ The "latent period" is the interval between membrane rupture and the onset of active labour.²

Premature rupture of membranes results from accelerated membrane weakening by various factors through an increase in local cytokines and an imbalance between MMPs and TIMPs, increased protease and collagenase activity and factors that cause increased intrauterine pressure.³ Although vaginal GBS colonization does not appear to be associated with PROM, GBS bacteruria has been associated with preterm PROM and low birth weight infants.⁴

Patient with PROM presents with leakage of uid, vaginal discharge and pelvic pressure, but they are not having contraction. During the latency period, the ascent of pathogenic microorganisms from the lower genital area could create complications such as intrauterine infections. Since PROM is associated with lower latency from membrane rupture until delivery, it is an important cause of perinatal morbidity and mortality, including respiratory distress syndrome, neonatal sepsis, umbilical cord prolapse, placental abruption, and foetal⁵

MATERIAL AND METHODS

This was a prospective case control study conducted on 100 patients who entered labour room of department of obstetrics & gynaecology, Govt. S.K. Medical College, Sikar with history of leaking P/V as cases and patients with intact membranes were taken as their controls. All women are counselled about the study and informed written consent is obtained.

INCLUSION CRITERIA

- Gestational age > 37 weeks confirmed by dates, clinical examination and ultrasound.
- Lack of uterine contractions for atleast 1 hour from PROM
- Cervical dilatation 3cms
- Single live pregnancy in vertex presentation

- PROM confirmed by
- Direct visualization
- Fern test whenever required.

EXCLUSION CRITERIA

- Gestational age 3cms
- Previous caesarean section
- Malpresentation/multiple gestation
- Meconium stained liquor
- Contracted pelvis/Cephalopelvic disproportion

The study variables were age, booked/unbooked status, address, occupation, socio-economic status, literacy, ABO/Rh, serology, mode of delivery, indication of LSCS, weight of baby, Apgar score, NICU admission, sex of baby, neonatal morbidity, neonatal mortality, congenital abnormalities, presence of fever, PPH, maternal mortality etc. Data was collected after obtaining consent from the patient. All the cases in the study group were subjected to a complete obstetrical work-up including history, general physical examination and systemic examination and relevant laboratory investigations. The observation of the study was recorded in Microsoft excel 2007 and the data were analyzed using SSPS software version ver. 21.0 and described using mean and percentages.

RESULTS

In our study shows that out of 100 patients 47% were from 21-25 Yrs age group, 27% were from 26-30 Yrs age group, 21% were from \leq 20 Yrs age group and 5% were from more than 30Yrs age group.

Table-1: Type of delivery wise distribution

Mode of delivery	Case	Control	p-value
Vaginal delivery	61	76	0.021
LSCS delivery	39	24	
Total	100	100	

Table-2: Maternal morbidity

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Maternal morbidity	Case	Control	p-value
Chorioamnionitis	5	0	0.001
Puerperal fever	13	3	
Wound infection	3	2	
UTI	2	0	
Total	23	5	

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 $16\%\,$ puerperal fever, 5% chorioamniotis and 5% wound infection and 2% accounted to UTI in our study.

Table-3: Neonatal morbidity

Neonatal morbidity		Control	p-value
Respiratory distress syndrome		6	0.001
Septicemia and Pneumonia		0	
Jaundice	2	3	
Conjunctivitis		0	
Intraventricular hemorrhage	2	0	

In our study out of 100 cases studies, 27% accounted for respiratory distress syndrome, 13% septicemia in study group. while conjunctivitis, neonatal jaundice (hyperbilirubinemia) and intraventricular hemorrhage accounted for 2%, 3% and 2% each.

DISCUSSION

Premature rupture of membranes is fairly a common complication of pregnancy and can lead to increased maternal complications, operative procedures, neonatal morbidity and mortality The present study was undertaken to identify risk factors causing PROM and to study labor outcome maternal morbidity and perinatal morbidity and mortality associated with PROM.

In our study shows that out of 100 patients 47% were from 21-25 Yrs age group, 26% were from 26-30 Yrs age group, 21% were from \leq 20 Yrs age group and 5% were from more than 30Yrs age group.

These findings correlated with study of Umaid t et al⁶ who found that 40.33% of 300 cases of PROM belong to age group between 21-25 years.

12% puerperal fever, 4% chorioamniotis and 3% wound infection and 2% accounted to UTI in our study.

Devi A et al.⁷ found that 1.7% of his patients developed fever within 24 hours of PROM, 18.6% after 48 hours.

In our study out of 100 cases studies, 27% accounted for respiratory distress syndrome, 13% septicemia in study group. while conjunctivitis, neonatal jaundice (hyperbilirubinemia) and intraventricular hemorrhage accounted for 2%, 3% and 2% each Lieman J M et al,2005[®] was observed that composite neonatal minor morbidity such as hyperbilirubinaemia and transient tachypnoea of the newborn was significantly higher among pregnancies delivered at 34 weeks. Composite major neonatal morbidity including respiratory distress syndrome and intraventricular haemorrhage was not significantly different.

CONCLUSION

Poverty, rural area, lack of proper health services, lack of awareness are the main reasons for poor foetomaternal outcome in the patients with PROM.

REFERENCES

- Dutta DC. Preterm labor, preterm rupture of the membranes, postmaturity, intrauterine death of the fetus. In: Konar H, editor. Textbook of obstetrics. 7th ed. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd;2013.p.317-8.
- MacDonald T, Saurette K. Management of PROM at term. AOM Clinical practice guideline 2010;13(1):1-25.
- Shah M, Sandesara P. Fetomaternal outcome in cases of PROM-A case control study. Guj Med J 2011;66(1):36-8.
- Gibbs RS. Premature rupture of the membranes. In: Scott JR, Gibbs RS, Karlan BY, Haney AF, editors. Danforth's Obstetrics and Gynecology. 9 th ed. Philadelphia:Lipinncott Williams & Wilkins;2003.p.108-14.
- El-Messidi A, Cameron A. Diagnosis of premature rupture of membranes: Inspiration from the past and insights for the future. J Obstet Gynaecol Can 2010;32(6):561–9.
- Umed T, Aitra N, Baxi S, Hazra M. Labor characteristics in pre-labor rupture of membranes. J Obstet Gynecology India 1994;44:527.
- 7. Devi A, Rani R. Premature rupture of membranes: a clinical study. J Obstet

 Lieman JM. Preterm Premature Rupture of Membranes: Is There an Optimal Gestational Age forDelivery? The American College of Obstetricians and Gynecologists. Obstet Gynecol. 2005;105:12-7

Gyngecol Indig 1996:46:63.