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Original Research Article

A study of neonatal morbidity in preterm premature rupture of membrane mother

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ABSTRACT

Background: Premature rupture of membrane is one of the most common problems in obstetrics with 5-10% of term pregnancies. The aim was to study morbidity in neonates born to mothers with preterm premature rupture of membrane (PROM) more than 18 hours.
Methods: This is a prospective study in which a total of 50 neonates admitted in NICU in Katihar medical college and hospital, Bihar, India, born to mothers of PROM more than 18 hours were included in this study. Clearance from ethical committee was taken. Neonates born to mothers with antepartum haemorrhage, meconium aspiration syndrome, toxemia of pregnancy and rh-incompatibility were excluded from the study. Proper history, examination and laboratory tests were done and data were analysed using SSP-20.
Results: Among the included neonates, the most common clinical manifestations were respiratory distress syndrome 18 cases (36%), septicemia 4 cases (8%), meningitis 1 case (2%) and pneumonia 1 case (2%).
Conclusions: Neonates born to mothers with PROM are at high risk and active management is needed to deliver the baby within 24 hours of PROM for better neonatal outcome.

Keywords: Neonatal morbidity, PROM, RDS, Sepsis

INTRODUCTION

Premature rupture of membrane is one of the most common problems in obstetrics with 5-10% of term pregnancies. Foetal and neonatal morbidity and mortality are significantly affected by duration of latency and gestation at PROM.

The primary complication for the mother is risk of infection, complications for the newborn consists of prematurity, fetal distress, cord compression, deformation and altered pulmonary development.[1,2] The knowledge of incidence of early onset sepsis in relation to PROM and its effect on neonatal outcome is essential in order to prevent the neonatal morbidity.

Diagnosis of early onset sepsis, close observation for early signs of sepsis, aggressive evaluation and early treatment has decreased the incidence of early onset sepsis associated with PROM. Therefore, this study was conducted to evaluate morbidity in neonates born to mothers with PROM more than 18 hours.

METHODS

This is a prospective study in which a total of 50 neonates admitted in NICU in Katihar medical college and hospital, Bihar, India born to mothers of PROM more than 18 hours were included in this study after taking clearance from the ethical committee of the institution.

All neonates born to healthy mothers with PROM more than 18 hours were taken as inclusion criteria.

Exclusion criteria

Meconium aspiration syndrome, antepartum haemorrhage, ABO/Rh haemolytic disease, mothers with medical disease, toxemia of pregnancy, congenital anomalies, and mothers with PROM who have received antibiotics before labour.

blood investigations like (septic screen) TLC, DLC, Hb, C-reactive protein, ESR, peripheral smear, blood cultures, urine routine and culture, chest x-ray and CSF examinations done.

RESULTS

Table 1: Distribution of cases according to duration of PROM.

Duration of PROM	No. of cases
18-24 hours	27
24-72 hours	19
>72 hours	4
Total	**50**

The analysis showed that 54% mothers had PROM between 18-24 hours, 38% cases were between 24-72 hours and only 8% cases had PROM >72 hours.

Table 2: Distribution of cases according to neonatal morbidity.

Neonatal morbidity	No. of cases
Respiratory distress syndrome	18
Septicemia (EOS)	4
Meningitis	1
Pneumonia	1
NEC	0
IVH	0
Asymptomatic	26
Total	**50**

Table 3: Neonatal morbidity in relation to duration of PROM.

Complication	PROM 18-24 hours	PROM 24-72 hours	PROM >72 hours
RDS	10	2	6
Septicemia	0	2	2
Meningitis	0	0	1
Pneumonia	0	0	1
Total	**10**	**4**	**10**

Morbidity was seen in 24 (48%) cases out of 50. Here we can see that commonest complication is RDS with 36% incidence followed by septicemia in 8% cases.

This table shows that as duration of PROM increases, incidence of septicemia also increases (statistically significant P <0.001) which is not the case with RDS. Morbidity is more in neonates with longer duration of PROM.

DISCUSSION

Nili et al observed that the risk of pneumonia and mortality were much higher in group with > 24 hours of PROM whereas in this study we found that RDS is the commonest complication in PROM mothers.[3]

Taylor et al claimed that as latent period increased from 12 hours to more than 24 hours neonatal infection rate also increase from 1.3% to 13.3%.[4] The present study shows that complications are more as the duration of PROM increases.[2]

In present study incidence of PROM <72 hours was 92% which is similar to Woranart et al.[5]

Morbidity increases as the duration of premature rupture of membranes increases, as is shown in present study.[5]

CONCLUSION

Premature rupture of membranes is a high-risk condition. Active management is needed to enable delivery within 24 hours of premature rupture of membranes as it offers better neonatal outcome. Premature rupture of membranes is responsible for increased perinatal morbidity among preterm neonates. Morbidity increases as the duration of premature rupture of membranes increases. Therefore, early delivery is required to prevent various neonatal complications.

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REFERENCES

1. Kauser S, Tajammul A, Saleem A. Incidence and management of chorioamnionitis in cases with preterm rupture of membranes. Ann King Edward Med Coll. 1999;5:149-51.

2. Sadaf J, Qayyum B, Fatima N. Preterm prelabor rupture of membranes at 34-37 weeks: conservative versus active management. J Surg Pak. 2011;16(1):6-9.
3. Nilli A, Ansari SA. Neonatal complications of premature rupture of membrane. Acta Medica Iranica. 2003;41(3):176.
4. Taylor J, Garite TJ. Premature rupture of the membranes before fetal viability. Obstet Gyne. 1984;64:615-20.
5. Asindi A, Archibong EI, Mannan NB. Mother infant colonization and neonatal sepsis in prelabor rupture of membranes. Saudi Med J. 2002;23(10):1270-4.

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