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To predict the risk of early onset sepsis in relation to duration of Premature rupture of membrane

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Abstract

Introduction: *India has one of the highest infant mortality rate in the world. Early onset septicemia (EOS) is one of the leading cause for high IMR. Duration of PROM is important risk factor for EOS in neonates. Present study was done to predict risk of EOS in relation to duration of PROM.*

Material and Methods: *The present study was carried out in NICU of ESI Hospital, Department of paediatrics, Indore (M.P.) The present study extended over a period from august 2012 to November 2012. 300newborns born out of consecutive deliveries in ESI hospital were taken and observed for EOS in relation to duration of PROM.*

Results: *In this study we found that the incidence of Early onset neonatal infection was higher in babies born with more than 24 hour PROM.*

Conclusions: *With increasing duration of PROM there is increased chances of early onset neonatal sepsis. By this study we recommend neonates with history of more than 24 hour PROM in mother should be observed by neonatologist with high index of suspicion for any symptoms of EOS.*

Introduction

About 50% of the deaths that occur in 1st month of life are due to EOS. deaths). Being a controversial topic from the management and diagnosis point of view, as well as being a common but neglected problem, the present topic was undertaken to observe probability of early neonatal septicemia in relation to gestational age so that proper antibiotics can be administered at right time and also it will inhibit the irrational use of antibiotics. Though the blood culture is mandatory for diagnosis and determination of antibiotic therapy, this would result in delay treatment which would lead to adverse outcome in some neonates. However, antibiotics can be started early if we pick up septicemia earlier.

Materials and methods

The present study was carried out in NICU of ESI Hospital, Department of paediatrics, Indore (M.P.)The present study extended over a period from August 2012 to November 2012. 300 newborns born out of consecutive deliveries in ESI hospital Indore were taken.

The observation was applied to 300 consecutive live births born in our hospital from August 2012 to November 2012. Then the baby was followed up. For sepsis on the basis of clinical, hematological & blood culture basis for further 72 hrs of life

Information was collected regarding duration of the leaking per vaginum before delivery (PROM) from mothers. All the newborns were attended

and assessed at the time of delivery in labour room or operation theatre and a detailed examination was performed in warm comfortable, well lighted quite atmosphere. Gestational age was assessed at this first examination.

All the newborns were followed for 72 hrs of birth for clinical features like vomiting, regurgitation, tachypnea, grunting, poor feeding, dull, lethargic, hypothermia, hyperthermia, irritable, skin mottling, sclerema, pallour, cyanosis, abdominal distension, icterus, seizures, hepatosplenomegaly.

Examination of newborn done according to modified Ballard's score criterion from Cloherty.

Following investigations were done-

i. Hb
ii. T & D
iii. Band Cell Count
iv. Thrombocyte
v. X-ray Chest, if distress present
vi. X-ray abdomen if there were abdominal distension.
vii. CSF Routine & Microscopy in cases of signs suggestive of meningitis.
viii. Blood Culture: Cases were confirmed by positive blood culture

Results

Table Showing Latency of Prom and EOS

Latency of PROM	No. of cases	Culture positive
18-24 hrs	36(12%)	8(22.3%)
> 24 hrs	28(9.3%)	12(42.8%)
TOTAL PROM	64(21.3%)	20(31.25%)
No PROM	236(78.7%	11(5%)

Summary and Conclusion

1) In the present study out of 300 deliveries 64 i.e.(21.3%) babies were having history of PROM in mother.
2) 20 out all 64 with history of PROM i.e 31.25 % developed EOS.
3) 11 out of rest 236 with no history of PROMi.e.5% develop EOS.
4) Thus we can conclude that newborn with history of PROM hasnearly 6 times more risk of developing EOS than those with no history of PROM

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