growth restriction, also play a role in the susceptibility to the condition. Understanding these factors is essential in the prevention, diagnosis, and management of PPHN, ultimately improving outcomes for affected newborns.

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УДК 616.36-008.5-053.31(540)

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INCIDENCE AND CAUSES OF NEONATAL JAUNDICE IN A POPULATION INDIA

Introduction

Neonatal jaundice is a yellowish discolouration of sclera and skin of new born due to high bilirubin level. Neonatal jaundice is a common cause of mortality and morbidity in new born babies and account for up to 60% cases in term and 80% in preterm babies in the first week of life. Common causes of neonatal jaundice are physiological jaundice, breast feeding jaundice, breast milk jaundice, prematurity & various pathological causes like ABO incompability, Rh incompability, biliary atresia, neonatal hepatitis, neonatal sepsis, deficiency of G6PD enzyme, hypothyroidism and rareconditions such as Gilbert's syndrome etc.If Neonatal jaundice is not treated on time, especially in premature babies, unconjugated hyperbilirubinemia may lead to kernicterus, a serious neurological problem manifesting in the form of hypertonia, seizures, opisthotonus posturing and eventually can lead to deathor cerebral palsy as along-term sequel. Direct hyperbilirubinemia is always pathological andshould be promptly evaluated and treated either by medical or surgical means. In this study we have tried to find the common causes of neonatal jaundice in the newborns admitted inour hospitalwith hyper bilirubinemia. Studies have been done previously to and the causes of hyperbilirubinemia in newborns, but more studies are required from different geographical areas tosee the burden andcauses of neonatal jaundice so that acollective effort can be made to decrease the burden of neonatal mortality and morbidity resulting from neonatal hyperbilirubinemia.

Goal

To studyevaluate the incidence and causes of neonatal jaundice in babies admitted in the hospital.

Material and methods of research

The Study was conducted in one of the busiest hospitals of Jorhat, Assam. A Hospital based case control observational study and Duration of Study was conducted within a year. In this study include non physiologic jaundice for that require evaluation {onset of jaundice occurs before 24 hours of age, elevation of serum bilirubin requires phototherapy, a rise in serum bil-

irubin levels of 5mg/dl/day, signs of underlying illness in any infant (vomiting, lethargy, poor feeding, excessive weight loss, apnea, tachypnea or temperature instability), jaundice persisting after 8 days in a term baby or after 14 days in a premature infant . Clinical jaundice is visible yellowish discoloration of skin of newbornsin day light. Neonates that were born in the hospitaland developed clinicaljaundice requiring investigation ortreatment were enrolledin the study. Consent was obtainedfrom parents. Institutional ethics committee clearance was obtained.

Result of research and their discussion

In the present study, The mean onset of mother age around 26 years for pregnancy .In that Neonatal jaundice is a most common cause of mortality and morbidity in newborn babies and account for up to 60% cases in full term and 80% in preterm babies in the first week of life .Out of mostly premature babies and full term delivered by vaginal delivery nearly 70 percentage and remaining 30 percentage by Caesarean delivery Cases. After delivery that breastfed newborns may be at increased risk for early-onset exaggerated physiologic jaundice because of relative caloric deprivation in the first few days of life and also decreased volume and decreased frequency of feedings may result in mild dehydration and the delayed passage of meconium therefore Apgar scores were pretty much bad. Compared with formula-fed newborns, breastfed infants are three to six times more likely to experience moderate jaundice (total serum bilirubin level above 12 mg per dL). When coming to main data Out of 710 newborns delivered during the study period 439 (61.8%) newborns developed clinical jaundice. Out of 439 newborns with clinical jaundice, 290 (66%) newborns had physiological jaundice and the rest 149 (34%) developed pathological jaundice. Among the 149 babies developing pathological jaundice 87 (58.3%) were males and 62 (41.6%) were females and among the 290 babies developing clinical jaundice 162 (56%) were males and 128 (44%) were female. Out of 149 newborns who developed pathological jaundice 46 (31%) newborns had ABO incompatibility, 42 (28%) newborns had breast feeding jaundice, 18 (12%) newborns were preterm. 2 (1.3%) newborns had cephalohematoma, 5 (3.3%) newborns had Rh incompatibility,12(8%) babies had G6PD deficiency,7 (4.7%) newborns had sepsis and in 17 (11.4%) babies no definite cause was found; 36 (24.1%) newborns had history of previous sibling requiring phototherapy; 5 (3.3%) newborns had history of birth asphyxi; 11(7.3%) newborns were born to mothers with history of Gestational Diabetes Mellitus; 9 (6%) new born was born to mother with history of hypothyroidism Out of 149 newborns with pathological jaundice, 2 (1.3%) newborns required double volume exchange transfusion as a therapeutic intervention for the treatment of jaundice. Out of the two babies requiring double volume exchange transfusion, one baby had ABO incompability and one hadRh incompabilityas acause of jaundice.

In This study wehave triedto and the common causesof neonatal jaundice in the newborns admitted in our hospital with hyperbilirubinemia. Studies have beendone previously to and the causes of hyperbilirubinemia in newborns but more studies are required from different geographical areas to see the burden and causes of neonatal jaundice so that a collective effort can be made to decrease the burden of neonatalmortality and morbidity resulting from neonatal hyperbilirubinemia. Moreover, few studies are done from our geographical area to see the causes of neonatal jaundice.

Table 1 – Causes of pathological jaundice

Causes	N=149	Percentage
ABO incompatibility	46	31%
Breastfeedingjaundice	42	28%
Prematurebabies	18	12%

Cephalohematoma	5	3.3%
Rhincompatibility	7	4.7%
G6PD deficiency	12	8%
Sepsis	7	4.7%
Idiopathic	17	11.4%

Conclusion

In this study we have tried to and the incidence and common causes of neonatal jaundice in our geographical area. We found that the incidence of clinical jaundice was 61.8% out of which majority was physiological jaundice (66%). The incidence of jaundice was more in males compared to females. Most common cause was ABO incompability, second was breast feeding jaundice, third wasprematurity. Other cause were cephalohematoma, Rh incompatibility, G6PD deficiency, sepsis. Thus adequate feeding, preventing premature deliveries, good monitoring of babies with ABO incompability, prematurity, Rh incompability, G6PD deficiency can decrease the mortality and morbidityassociated with neonatal jaundice.

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