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STUDY OF THE MORBIDITY PATTERN IN THE GAYATHRI VIDYA PARISHAD OF HEALTH CARE AND MEDICAL TECHNALOGY NICU, VISAKHAPATNAM DISTRICT, ANDHRA PRADESH, INDIA

Dr V . R . V Krishna Kishore

Assistent Profssor Of Pediatrics Gayathri Vidya Parishad Of Health Care And Medical Technalogy

ABSTRACT

OBJECTIVE: To study of the morbidity pattern in **GAYATHRI VIDYA PARISHAD OF HEALTH CARE AND MEDICAL TECHNALOGY NICU ,VISAKHAPATNAM.**

METHODS: Retrospective study of medical records during the period of JANUARY 2018 to DECEMBER. 2018 of all neonates who were admitted to the NICU were reviewed Data regarding the place of birth, gestational age, birth weight and diagnosis were recorded.

PARTICIPANTS: Study sample 625 neonates. With some illness who were admitted to NICU.

OUTCOME: Study of Pattern of Morbidity among neonates admitted in NICU during ONE YEAR period.

RESULTS: A total of 610 babies in NICU were included for data analysis. Ratio of inborn 244(40%) and out born 366 (60%). Major causes of Morbidity were neonatal jaundice 214(35%) neonatal sepsis 183(30%) ,Prematurity 152(25%) birth Asphyxia with HIE 61((10%).The most common cause of referral from outside were neonatal jaundice 153 (25%) neonatal sepsis 122 (20%) prematurity 61(10%) birth asphyxia with HIE 30(5%).

CONCLUSION: Study identified neonatal jaundice and neonatal sepsis and prematurity and birth asphyxia with HIE as the major cause of morbidity. Adequate antenatal care to the at risk mothers and advances in the neonatal intensive care will improve the neonatal outcome.

KEYWORDS : neonatal jaundice, neonatal sepsis, prematurity

INTROUDUCTION:

Globally every year four million babies die in the neonatal period (1st 4 weeks of life), with India contributing to one-fourth of the total mortality burden [1].75% of the neonatal deaths occur in the first week of life and at least 50% occur in the first day of life[2].

About 0.76 million neonates die every year in India, the highest for any country in the world. The neonatal mortality rate (NMR) of the country did decline from 52 per 1000 live births in 1990 to 29 per 1000 live births in 2012 (SRS 2012) but the rate of decline has been slow, and lags behind that of infant and under - five child mortality rates The three major causes of neonatal deaths are preterm, birth complications, infections, and intra partum related complications; together, they contribute to nearly 90% of total neonatal deaths. While almost all of intra partum-related deaths and majority of prematurity-related deaths occur in the first week of life, more than half of infection related deaths occur after the first week of life. This has implications for the home/community-based postnatal care of neonates[3].

The Millennium Developmental Goal (MDG) 4 envisaged a two-third reduction of IMR by 2015. The ENAP (Every Newborn Action Plan) recently endorsed by the World Health Assembly calls for NMR < 10/1000 live births by year 2035 in all countries. XII plan has set a goal of IMR of 25/1000 live births by 2017 which requires a NMR of 18/1000 live births [4].

So, all efforts to reduce IMR/U5MR essentially have to focus on steps for sustained reduction of neonatal mortality. Evidence based interventions especially facility based care can lead to significant reduction in NMR[5].

Purpose of this study is to know the pattern of illnesses of babies born with in the institutional deliveries and born out of institutional deliveries and non-institutional deliveries, referred to NICU (**GAYATHRI VIDYA PARISHAD OF HEALTH CARE AND MEDICAL TECHNALOGY**), to implement the strategies of Newborn and antenatal care, to reduce the neonatal morbidity, as most of the causes of neonatal morbidity and mortality are preventable.

Neonatal period is very vulnerable period of life due to many problems which can occur, more so in babies born preterm or low birth weight. For applying preventive strategies we have to have the data on morbidities which claiming the neonatal life so we under took the study to assess the commonest causes for admission.

METERIALS AND METHODS:

This is a hospital based retrospective study carried out in the NICU **GAYATHRI VIDYA PARISHAD OF HEALTH CARE AND MEDICAL TECHNALOGY** for a period of one year JANUARY 2018 to DEMBER 2018. All admitted neonates were enrolled on structured protocol which included data on mode and place of delivery, weight at admission, gestational age, diagnosis, and relevant investigation.

INCLUSION CRITERIA:

All the neonates who were admitted to the NICU. Morbidities at the time of admission were taken into consideration for data analysis.

RESULTS:

A total of 610 neonates were included for the data analysis. Of these babies 244(40%) are inborn and 366(60%) are out born, ratio of the in born to out born neonates was 0.66%. Major causes of Morbidity were neonatal jaundice 214(35%) neonatal sepsis 183(30%) , Prematurity 152(25%) birth Asphyxia with HIE 61((10%). The most common cause of referral from outside(GOVT and Private nursing homes) were neonatal jaundice 153(25%) , neonatal sepsis 122(20%) prematurity 61(10%) birth asphyxia with HIE 30(5%)

Table 1: clinical profile of inborn and outborn neonates

Clinical Profile of Neonates			
Diagnosis	**Inborn 294(40%)**	**Outborn 366(60%)**	**Total Number610 (100%)**
Prematurity(PT) 152			
PT with HMD	61(10%)	40(6.6%)	101(16.6%)
PT with Sepsis	20(3.8%)	10(1.6%)	30(4.4%)
PT with Other Morbidities	5(0.8%)	6(0.98%)	11(1.8%)
PT with LBW care	5(0.8%)	5(0.8%)	10(1.6%)
TERM			
Birth asphyxia with HIE	31(5%)	30(5%)	61(10%)
Sepsis	61(10%)	122(20%)	183(30%)
Hyperbilirubinemia	61(10%)	153(25%)	35%)

Table 4: Disease specific mortality:

Cause of death	Total no=21
PRETREM RDS	**15(71.4%)**
NEONATAL SEPSIS	**4(19%)**
Birth asphyxia	**2(9.6%)**

Among total cases, case fatality rate was highest in preterm with RDS 15cases (71.4%) sepsis 4 cases(19%). birth asphyxia 2(9.6%).

DISCUSSION:

Accurate data on the morbidity are useful for many reason. It is important for the providers of primary care, investigators, and local

and national health administrators and for the decision makers to design interventions for prevention and treatment and to implement and evaluate health care programs.

In our study 152(25%) are delivered prematurely,. This may be due to poor maternal health status, poor antenatal checkup and poor socio – economic status of families.

In this study among all the neonates common morbidities are neonatal hyperbilirubinemia 214(35%), neonatal sepsis 183(30%) birth asphyxia with HIE 61(10%).

The incidence of birth asphyxia in our study (10%); though it is higher than that of the NNPD data (8.3%) [7]. Mani Kant Kumar et al reported 18.2% asphyxia among neonates admitted to a teaching hospital in Bihar [8] The higher incidence of asphyxia may be related to delayed referral and lack of prompt intervention of high risk pregnancies and also lack of adequate neonatal resuscitation.

The incidence of neonatal jaundice in our study (24.97%) is higher than that of other studies (Neogi et al (18%), Sridhar et al 7%)[6,9].The incidence of preterm RDS (16.56%) is higher than that reported by others- Mani Kumar et al (9.7%)[8], is lower than that reported by Sridhar et al (23.4%) [9], The overall incidence of LAMA (6.8%) is comparable to that of other studies (NNPD 7.5%,[7] The overall mortality of the SCNU (3.5%) is lower than that reported by Sridhar et al (7.2%)[9].

The incidence of neonatal jaundice is high in our study 214(35%).the high incidence of neonatal jaundice may be due to ABO incompatibility ,delayed initiation of breast feeding ,dehydrartion,lack phototherapy facilities in this area. We have done exchange transfusion for severe neonatal hyprtbilirubinemia cases.

Neonatal sepsis next common cause of morbidity 122(20%) more number of cases reported from term..

Birth asphyxia with HIE was the one of the most important cause of the morbidity among term babies more than 2.5 kg. This high incidence of asphyxia in vaginal deliveries can be reduced to a great extent by ensuring strict intra partum monitoring judicious and timely intervention may help to reduce the incidence of asphyxia related morbidity.

In our study 25% (152) babies delivered prematurely, lack of prenatal care or irregular prenatal care has been found to be associated with high incidence of premature deliveries, prematurity and related morbidity and mortality.

Present study having identified neonatal hyperbilirubinemia ,neonatal sepsis LBW, HIE, as major causes of morbidity, there is need for the developments in obstetric and neonatal units for better antenatal, obstetric and neonatal intensive care services, with the use of most sophisticated technology.

CONCLUSION:

This study identified, out of 610 babies, (prematurity), 25% (152), neonatal hyperbilirubinemia (35%), and sepsis (30%),birth asphyxia with HIE(10%). as major causes of morbidity. All these etiologies are preventable up to some extent and if detected earlier it can be effectively treated in order to reduce morbidity and mortality. Adequate antenatal care to the at risk mothers and advances in the neonatal intensive care will improve the neonatal outcome. In case of prematurity attempts to prolong the pregnancy each week, along with antenatal steroids might improve the neonatal outcome considerably.

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