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A RETROSPECTIVE STUDY OF NEONATAL FACTORS RELATING TO THE NEONATAL HYPERRBILIRUBINEMIA

Nursing

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ABSTRACT

A retrospective study was conducted to find the incidence of neonatal hyperbilirubinemia in neonatal care unit and to find out the associated neonatal factors relating to the neonatal hyperrbilirubinemia in a seleccted tertiary care hospital, Kelambakkam, Kanchipuram district, Tamil nadu, India. The sampling technique was non-probability- Convenient sampling technique. The data collected over a period of January 2016 to October 2016. Totally 703 neonates were found, among them 278 neonates were diagnosed as hyperbilirubinimia. The study findings shows that most of the neonates were females (54.90 %), majority of the neonates were term babies (92.60 %), majority of the neonate's birth weight was normal (89.18 %), most of the neonates were multi para (51.77 %), majority of the neonates were delivered by single birth (99.14 %), most of the neonate's blood group and Rh type was 'B' positive. Majority of the neonates were not having any underlying neonatal illness (90.7%). The number of hyperbilirubinimia identified was 278out of 703 live births, hence the rate of incidence was 39.5%. The study findings also shows that there was a significant association betweenthe two selected neonatal factors such as neonatal birth weight and neonate's blood group with neonatal hyperbilirubinemia.

KEYWORDS

Neonatal Hyperbilirubinemia

INTRODUCTION:

Hyperbilirubinemia is a condition in which there is too much bilirubin in the blood. When red blood cells break down, a substance called bilirubin is formed. Babies are not easily able to get rid of the bilirubin and it can build up in the blood and other tissues and fluids of the baby's body. This is called hyperbilirubinemia. Because bilirubin has a pigment or coloring, it causes a yellowing of the baby's skin, eyes, and other tissues. This is called jaundice. Neonatal jaundice is a yellowish discoloration of the skin and other tissues of a newborn. A bilirubin level more than 85 mlmol /l (5 mg/dl) manifests neonatal jaundice. In newborn jaundice is detected by watching the skin, newborn have an apparent icteric sclera, and yellowing of the face extending down to the chest. In neonates the dermal icterus is first noted in the face and as the bilirubin rising level proceeds caudal to trunk and then to the extremities. Hyperbilirubinemia in the first 24 hrs often results in hemolytic diseases of the newborn erythroblastosis fetalis an abnormal rapid rate of RBC destruction. Physiological jaundice is more common than the Pathological jaundice.

The neonatal factors included in this study was gender, gestational age, birth weight , parity, type of gestation, blood grouping & typing (Kogila.P, anoja, T.Dayana, & M.Divya, 2016)

Title: A retrospective study to assess the incidence and neonatal factors relating to the neonatal hyper bilirubinemia in a selected tertiary care hospital, Kelambakkam, Kanchipuram District, Tamil nadu, India.

Objectives:

1. To determine the incidence of neonatal hyperbilirubinemia.
3.To find out the association between the selected neonatal factors and neonatal hyperbilirubinimia.

METHODOLOGY:

The research approach was quantitative evaluative approach and the study design was a retrospective study conducted in the neonatal intensive care unit, Chettinad Hospital & resaerch Instittute. The data collected over a period of January 2016 to October 2016. The sampling technique was non-probability- Convenient sampling technique. Selected neonatal risk factors proforma was formulated which include gender, gestational age, birth weight , parity, type of gestation, blood grouping & typing. The data collected over a period of 1week.

Inclusion Criteria

The study includes Data on live births from January 2016 to October 2016.

Exclusion Criteria

The study excludes neonates with congenital anomalies and serious medical conditions.

Data collection procedure:

Obtained departmental clearence and ethical clearance. Written permission obtained from medical record department, Chettinad Hospital & Resaerch Instittute to collect the neonatal data. Necessary data for the present study was collected from birth register and medical records of neonates who treated for hyperbilirubinemia . The study includes data on live births over a period of 10 months from January 2016 to October 2016.

DATAANALYSIS

Table 1 Frequency and percentage distribution of selected neonatal factors of neonates with hyperbilirubinemia (N =278)

S.No	Selected Neonatal Factors	Category	Frequency	Percentage
1	GENDER	Male	133	47.8 %
		Female	145	52.2 %
2	GESTATIONAL AGE	Preterm	33	11.8 %
		Term	245	88.1 %
		Post term	0	0
3	BIRTH WEIGHT	Normal	231	83.0 %
		Low Birth Weight	41	14.7 %
		Very Low Birth Weight	6	2.1 %
		Extreme Low Birth Weight	0	0
4	PARITY	Primi Gravida	117	42%
		Multi Para	161	58%
5	TYPE OF GESTATION	Single	276	99.2 %
		Multiple	2	0.8 %

Table 2 Incidence of neonates with hyperbilirubinemia

Sno	Total Number Of Neonates	Neonates With Hyperbilirubinemia	Incidence Percentage
1	703	278	39.5%

Table 3 Association between the selected neonatal factors and neonatal hyperbilirubunimia N= 278

S.No	CHARACTERISTICS	CATEGORY	TOTAL NUMBUR	HYPERBILIRUBINEMIA	NON-HYPERBILIRUBINEMIA	χ^2 value
1	Gender	Male	317	133	184	
		Female	386	145	241	1.364 (df-1)
2	Gestational age	Preterm	52	33	19	13.26 (df-2)
		Term	651	245	406	
3	Birth weight	Normal	627	231	396	17.35 (df-4)
		Low Birth weight	69	41	28	
		Very Low Birth weight	7	6	1	
4	Parity	Primi gravida	339	117	222	7.08 (df-1)
		Multi gravida	364	161	203	
5	Type of gestation	Single	697	276	421	0.08 (df-1)
		Multiple	6	2	4	
6	Blood group	A	159	66	93	55.09 (df-6)
		B	243	90	153	
		O	232	104	128	
		AB	69	18	51	
7	Rh typing	Positive	641	251	390	0.5 (df-1)
		Negative	62	27	35	
8	Neonatal illness	Yes	65	32	33	7.41 (df-1)
		No	638	246	392	

DISCUSSION

The above table shows that most of the neonates were females (54.90 %), majority of the neonates were term babies (92.60 %) , majority of the neonate's birth weight was normal (89.18 %), most of the neonates were multi para (51.77 %), majority of the neonates were delivered by single birth (99.14 %), most of the neonate's blood group and Rh type was 'B' positive. Majority of the neonates were not having any underlying neonatal illness (90.7%)

The syudy findings shows that the number of hyperbilirubinimia identified was 278/ 703 live births, hence the rate of incidence was 39.5%.

The study conducted by the Anil shetty & binoop S Kumar (2014) conducted a study on neonatal hyperbilirubinemia on tertiary care hospital. The study findings shows that 753 neonates were treated for hyperbilirubinemia, the total number of live births was 5589. The incidence of neonatal hyperbilirubinemia was 13.47%. ABO blood group incompatibility was the most common cause of hyperbili rubinemia. In this present study blood group and birth weight are associated with the hyperbilirubinemia.

The study results shows that there is a strong and significant association between the two selected neonatal factors such as birth weight and blood group with neonatal hyperbilirubinemia. The other factors are not associated with neonatal hyperbilirubinimia.

NURSING IMPLICATIONS:

The findings emerged out of this study has got implications in the field of nursing education, nursing practice, nursing administration and nursing research.

NURSING EDUCATION:

The knowledge of neonatal hyperbilirubinimia and associated neonatal factors will help the nursing students for the early identification of morbidity status related to hyperbilirubinimia.

NURSING PRACTICE:

The study findings shows that the nurse working in postnatal ward and neonatal intensive care unit should aware of hyperbilirubinimia and it's related neonatal factors, so that they can be able to do early identification of the disease and prevention of hyperbilirubinimia related complications.

NURSING ADMINISTRATION:

The incidence of neonatal hyperbilirubinemia is relatively high, so the nursing administrator should organize continuous nursing education program to improve the level of nurse's knowledge on hyperbilir ubinimia which enable the nurses to reduce the neonatal morbidity related to hyperbilirubinimia and promote the health status of neonates.

NURSING RESEARCH:

The study helps the investigator to develop insight regarding neonatal hyperbilirubinemia and plan for structured teaching program for nurses working in post natal area and neonatal intensive care unit.

CONCLUSION:

The incidence of neonatal hyperbilirubinimia is relatively high. The nurse working in neonatal unit should have adequate knowledge and skills in handling the neonates with hyperbilirubinemia to reduce morbidity burden and to promote the health status and to improve the quality of life.

To site this paper

Kogila.P, anoja, S., T.Dayana, & M.Divya. (2016):: "Effectiveness of STP on kangaroo mother care among mothers of neonates" Global Journal of Resear ch Analysis (ISSN No 2277-8160), vol. (5) No.(5), May 2016, pp.387-388,papperID: 10.15373/22778160,available onkinne through-http:://www.world wide journals.com/gra/

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