"A DESCRIPTIVE STUDY TO ASSESS THE PREVALENCE RATE OF NEONATAL JAUNDICE IN NEWBORN BABIES DELIVERED IN THE ASHIRVAD MULTISPECIALTY HOSPITAL, VARANASI."

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Abstract

The most prevalent ailment in neonates that necessitates medical care and hospital readmission is jaundice. The buildup of unconjugated bilirubin causes the skin and sclera of babies with jaundice to turn yellow. Unconjugated hyperbilirubinemia in the majority of neonates represents a typical transitional phenomenon. However, certain babies may have abnormally high serum bilirubin levels, which can be concerning because unconjugated bilirubin is cytotoxic and can kill newborns and leave surviving babies with lasting neurologic consequences (kernicterus). Because of these factors, newborn jaundice often necessitates a medical assessment.to determine how common neonatal jaundice is in newborns at Varanasi's Ashirvad Multispecialty Hospital.To evaluate the mother's risk factor for newborn jaundice.To find out association between prevalence rate and demographic variables. The present study was a prospective, cross-sectional, jaundice using standardized clinical assessment, hospital based study involving all neonates who were born at Ashirvad multi speciality. Hospital a tertiary care centre, Varanasi ,U.P). Convenience sampling is used, statistical data is processed, and the results are displayed in a figure and text graph. This study comprised one hundred babies in all. Neonatal jaundice was found in 59% of these infants.ABO and other risk factors were linked to Blood group incompatibility (p = 0.001), infections (p = 0.017*), Caesarean delivery (0.000*), birth weight of 2501-3000g (52.4%), age greater than 7 days (P = 0.002*), maternal age of 35 and older (51.5%), female gender, and preterm (P = 0.017*).*

Keyword: Hyperbilirubinemia (high bilirubin), Phototherapy (light treatment), Kernicterus (brain damage), and bilirubin encephalopathy .

Introduction

When bilirubin is deposited into an infant's skin, it causes elevated total serum bilirubin (TSB), also known as neonatal hyperbilirubinemia, which manifests clinically as neonatal jaundice. Neonatal jaundice is characterized by yellowish skin, sclerae, and mucous membranes. The name "jaundice" comes from the French word "jaune," which means "yellow."The most prevalent illness during the first two weeks of life is neonatal jaundice, which very frequently results in readmission to the hospital following delivery.[1] In the first week following delivery, 60% of term and 80% of preterm neonates experience clinical jaundice.[2] Physiologic jaundice, often known as neonatal jaundice, is typically a mild, temporary, and self-limiting illness. But it's important to differentiate this from the more serious pathologic

jaundice.Unconjugated hyperbilirubinemia (UHB) and conjugated hyperbilirubinemia (CHB) are the two forms of newborn hyperbilirubinemia. The underlying cause of neonatal hyperbilirubinemia must be discovered once neonatal jaundice has been clinically diagnosed. Clinical jaundice in the majority of newborns is caused by unconjugated hyperbilirubinemia. Conjugated hyperbilirubinemia, which is invariably pathogenic and indicates an underlying medical or surgical etiology, does occur in certain newborns. If pathologic jaundice is not recognized and treated, bilirubin encephalopathy and its related neurological system may develop. Pathologic UHB and CHB have a wide range of causes. The detrimental effects of unconjugated bilirubin on the central nervous system are especially common in preterm newborns and those with hereditary enzyme deficits.

Need for the study

Studying neonatal jaundice is important because it can help prevent serious complication
and improve out come for newborns. if left untreated ,neonatal jaundice can lead to serious
complication ,such as kernicterus,a neurological problem that can cause life long damage.
jaundice is a common reason for newborn to be readmitted to the hospital. By lower hospitalization, early diagnosis and treatment can lower a newborn's yearly medical expenses. Raising awareness of newborn jaundice can aid in identifying instances that are at high risk.
To avoid infant death and chronic morbidity. Technology enabled screening solution can help incease access to screening and follow up care. Researcher need a detailed and careful study about of something to find out more information about it. In the researcher need is a study to specific problem ,concern,or issue using the scientific method .In this study the main researcher need are opportunities abound for neonatal jaundice and its management of Jaundice.it is defined to promote strategies to increase adherence to prevent for further infection and complication.

Statement of the peoblem

"A descriptive study to determine the prevalence rate of neonatal jaundice in newborns born at the Ashirvad Multispecialty Hospital in Varanasi."

Objective of the study

1. To determine how common neonatal jaundice is in Ashirvad multispeciality hospital Varanasi.
2. To assess the risk factor of mother in neonatal Jaundice at Ashirvad multispecilaity hospital ,Varanasi.
3. To find out association between prevalence rate and demographic variables.

Hypothesis

H1: A Tool is any instrument or simple piece of equipment that your hold in your hand and use
to particular of work.
H2: In order to determine the knowledge and use to phototherapy machine in newborn babies through the bilirubin blood test report.

Research methodology

Research approach: Descrptive approach
Research design: Non –Experimental research design.
Variable

Demographic variable : The variable use for the present study are - Age, educational status, occupation, Type of family, economic status of family.

Independent variable: In this present study use for dependent variables.

Dependent variable: In this study use for dependent variable are used

Setting: Ashirvad Nursing Multi Speciality Hospital

Population: Neonatal child

Inclusion criteria :

- Researcher those who study in Ashirvad multi-Specility Hospital Varanasi only.
- Researher who are willingly to participate.
- Newborn babies who are present at the time of data collection
- Neonate who are admittend in ashirvad multi-speciality hospital Varanasi .

Exclusion criteria:

Samle: In This study the sample comprises of child age less than 1 year child(Neonate)

Sample size:100

Sampling technique: Convenient Sampling Technique

Tools:

Tools A: Clinical assessment of neonates baby.

Tools b: Bilirubin blood test report of neonate baby.

Result and finding

Section A:

Frequency & percentage distribution of demographical characteristic

Demographic variables of the baby		frequency	Percentage
New born age of admission in Neonatal unit(days)	≤7days	66	66%
	>7days	34	34%
	Total	**100**	**100%**
Gender	female	45	45%
	male	55	55%
	Total	**100**	**100%**
Birth weight	1500g-2000g	5	5%
	2001g-2500g	35	35%
	2501g-3000g	60	60%
	Total	**100**	**100%**
Demographic variables of the mother(N=100)		frequency	Percentage
Maternal age	15-24	30	30%
	25-34	50	50%
	35andmore	20	20%
	Total	**100**	**100 %**

SECTION - B

Prevalence rate of neonatal jaundicein 2023-2024(n =100)

The results that address the first study question about the prevalence of newborn jaundice are shown in this section.59 of the 100 babies in the sample had a clinical 1 retrospective diagnosis of neonatal jaundice based on the medical diagnosis of the newborn. According to the figure below, this resulted in a prevalence of 59%.

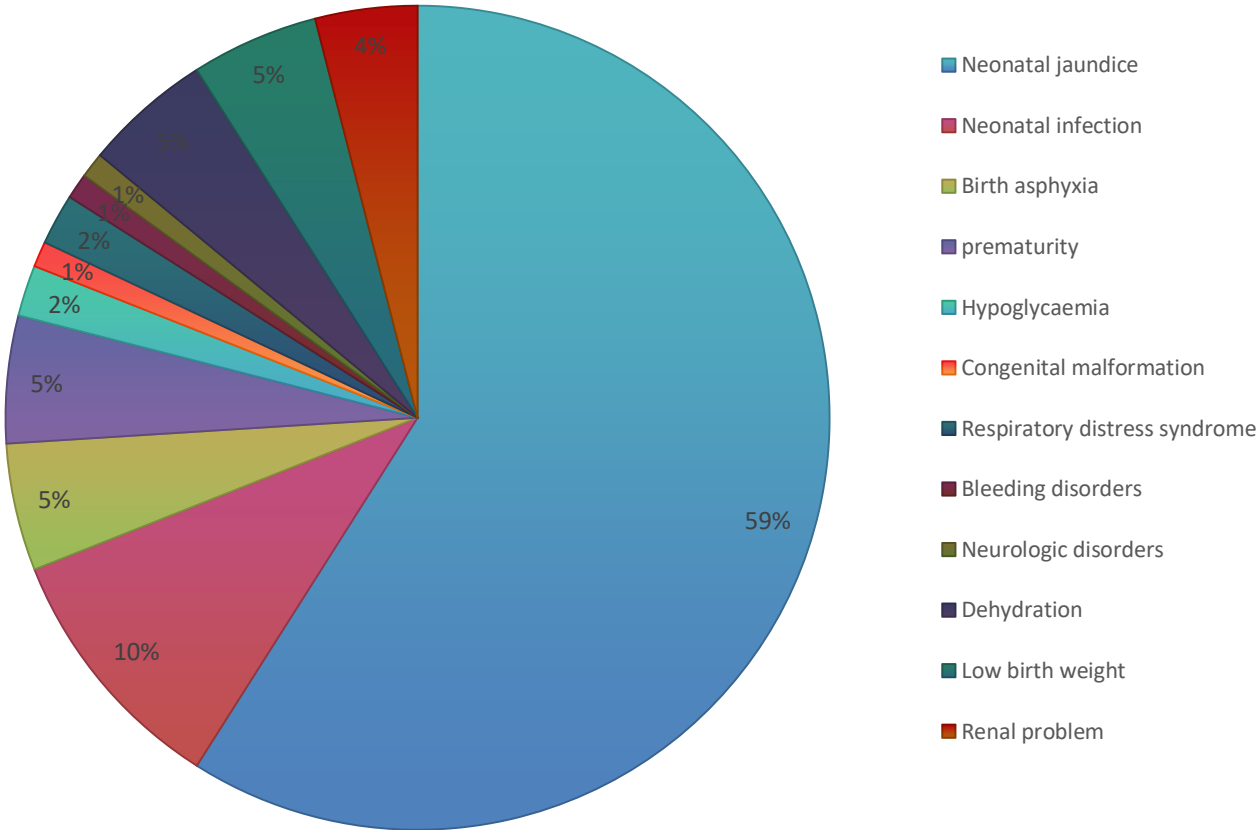

Figure Prevalence of neonatal jaundice in 2023-2024 Figure:
Prevalence of neonatal jaundice in 2023–2024 The factors used to diagnose neonatal jaundice are displayed in the table above. Twenty (20%) of the neonates had bilirubin levels (more than 5 mg/dl) prior to seven days. 65 (65%) were not checked for newborn jaundice after 7 days. Of the babies, 40 (40%) had yellow skin, 25 (25%) had pink skin, and 19 (19%) had bluish skin. Ten (10%) had yellow color before 24 hours after birth, forty-nine (49%) had it after 24 hours, and thirty (30%) were not evaluated for yellow color.

Nursing implication

Nursing education

Research indicates that structured nursing education, training, and simulation significantly improve knowledge and clinical practices regarding neonatal jaundice (NNJ) management, reducing bilirubin-related complications. Effective education focuses on early identification, phototherapy management, and maternal education to address knowledge gaps.

Nursing research

Nursing research on neonatal jaundice (NNJ) focuses on early identification, management protocols, and maternal education to prevent severe hyperbilirubinemia. Key studies emphasize nurses' roles in using phototherapy, monitoring bilirubin levels, and educating mothers, as inadequate knowledge leads to delayed care. Key research topics include

improving nurses' knowledge, assessing nursing diagnoses (00194), and evaluating 5, "Neonatal Jaundice - StatPearls - NCBI Bookshelf - nursing interventions for home monitoring.

Nursing administration

Nursing administration in neonatal jaundice focuses on early detection, effective phototherapy management, hydration, and family education. Key responsibilities include monitoring bilirubin levels, protecting the infant's eyes and skin during light therapy, promoting frequent feeding (8–12 times/day) to enhance excretion, and identifying signs of acute bilirubin encephalopathy.

Nursing practice

Many newborns suffer from neonatal jaundice, a common ailment that can have serious consequences if left untreated. The quality of care given by nurses and midwives is significantly influenced by the KAP, particularly when it comes to managing neonatal Jaundice. The basis for delivering quality care is knowledge. The study identified information gaps about neonatal jaundice. Therefore, it's critical to give nurses and midwives a thorough awareness of neonatal jaundice, including its origins, risk factors, signs and symptoms, potential consequences, and suitable management techniques in the study context

Recommendations:

- The chosen hospital must identify and address the most prevalent risk factors for newborn jaundice.
- Neonatal jaundice needs to be better managed, and they need to be an enhancement of nursing and midwifery procedures concerning newborn jaundice.
- The chosen Varanasi hospital must develop policies and strategies to assist the areas of weakness in the care of newborn jaundice in the hospital's neonatal unit after gaps and obstacles to the practice were identified.
- At the chosen district hospital, there are numerous neonatal risk factors linked to neonatal jaundice.
- When healthcare professionals who work with newborns need to play an significant role.

Conclusions:

At Ashirvad Multispecialty Hospital, newborn jaundice was rather common. Neonatal jaundice affected 59% of the babies that were admitted. The study's objective was to evaluate the frequency and risk factors of neonatal jaundice among infants admitted at Varanasi's Ashirvad Multispecialty Hospital in 2023–2024. ABO and other blood group incompatibility (p0.001*), infections (p0.017*), Caesarean delivery (P 0.000*), birth weight of 2501-3000g, age of more than 7 days (P 0.002*), maternal age of 35 and older, female gender, and prematurity (P 0.017*) were the most frequent risk factors linked to neonatal jaundice in this study. The results demonstrated that cephalohematoma, early hospital release, and not breastfeeding within an hour of delivery are not statistically significant.

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