Monitoring Quality of Nursing Care Provided for Neonates Suffering from Jaundice

Thesis

Submitted for Partial Fulfillment of the Requirements
of Master Degree in Pediatric Nursing

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List of Abbreviations

Abbr.	Full term
ABE	Acute Bilirubin Encephalopathy
CBC	Complete Blood Count
CFL	Compact Fluorescent Lamp
CO	Carbon Monoxide
CRP	Cerum Re-active Protein
ET	Exchange Transfusion
ETCO	End-Tidal Carbon Monoxide
FV	Femoral Vein
G6PD	Glucose-6-Phosphatase Dehydrogenase
HIV	Human Immunodeficiency Virus
ICU	Intensive Care Unit
IV	Intravenous
IVIG	Intravenous Immuno-Globulin
LED	Light-Emitting Diode
NICU	Neonatal Intensive Care Unit
NJ	Neonatal Jaundice
RBC	Red Blood Cells
RC	Reticulocytes Count
TCB	Transcutaneous Bilirubin
TSB	Total Serum Bilirubin
UA/V	Umbilical Artery / Vein
UV	Umbilical Vein
WBC	White Blood Cells

Operational Definitions

The Neonatal Period	The extra uterine continuum of intrauterine fetal life separated by birth. It refers to an infant in the first 28 day after birth. It is the most vulnerable and high-risk time in life because of the highest mortality and morbidity incidence in human life during this period. It represents the time of greatest risk to neonate. Approximately 65% of all deaths that occur in the first year of life happen during this four-week period
Neonatal Hyperbilirubinemia	Neonatal hyperbilirubinemia is a common clinical problem encountered during the neonatal period, especially in the first week of life. It is a clinical sign of excess conjugated or unconjugated bilirubin (hyperbilirubinemia). It is characterized by a yellow colouring of the neonate's skin and other tissues caused by high levels of circulating unconjugated bilirubin due to the breakdown of the red blood cells
Quality of Nursing Care	It is the appropriate execution of assessments and interventions intended to optimize neonate's outcomes, prevent adverse events and focus on neonatal safety issues
Exchange Transfusion	It is a removing high-bilirubin aliquots of the neonate's own blood and then systematically replacing it with "clean" donor blood to effect a rapid bilirubin decrease.

ABSTRACT

The study aimed to monitor quality of nursing care provided to neonates suffering from neonatal jaundice. **Research Design:** A descriptive research design used to conduct. **Setting:** the study was conducted at Neonatal Intensive Care Unit (NICU) in Ain Shams University Hospital and Mit Ghamer Hospital. **Subjects:** A purposive sample of fifty neonatal nurses and fifty neonates suffering from jaundice. **Tools:** data collection involved a structure interviewing questionnaire and observation check list: that adopted from (Ministry of Health, 2010). **Results**: the majority of the studied nurses had applicability of the standard care protocol of performed full assessment, phototherapy, history taking, lab investigation and monitoring neonate's hydration status. The reasons for non-applicability of the standard were poor training, less of experiences, unawareness of the importance of standard care protocols and inappropriate work conditions. **Conclusion:** The current study concluded that more than half of the studied nurses had good level of knowledge and all of them had competent performance regarding applicability of the standard care protocol for neonatal jaundice. In addition, there is a hindering factor found for non-applicability of the standard care hindering for care of neonatal jaundice. **Recommendation:** based on results of the study, periodical check for nurses working at NICU for the applicability of the standard care for neonatal jaundice to reach the applicability, periodical educational program for nurses working at NICU is mandatory, for the purpose of raising and updating the knowledge of nurses regarding neonatal jaundice to reach the highest possible degree of competency and orientation programs for newly appointed nurses who work in the neonatal care units for the application of neonatal care standard.

Key words: Neonatal jaundice, Quality of nursing care.

INTRODUCTION

The neonatal period is the extra uterine continuum of intrauterine fetal life separated by birth. It refers to an infant in the first 28 day after birth. It is the most vulnerable and high-risk time in life because of the highest mortality and morbidity incidence in human life during this period. It represents the time of greatest risk to neonate. Approximately 65% of all deaths that occur in the first year of life happen during this four-week period ***(Alexander, 2010 and WHO, 2011).***

Neonatal jaundice is a common clinical problem encountered during the neonatal period. It is a common disorder worldwide and accounts for 75% of hospital readmissions especially in the first week of life. It is a clinical sign of excess conjugated or unconjugated bilirubin (hyperbilirubinemia). It is characterized by a yellow coloring of the neonate's skin and other tissues caused by high levels of circulating unconjugated bilirubin due to the breakdown of the red blood cells ***(Hellowell and Crathern, 2011; Bhutani et al., 2013 and Ofili, et al., 2013).***

Neonatal jaundice is a concern because of the potential for encephalopathy and the possibility that it may be a sign of serious underlying illness**.** Fortunately, use of phototherapy or exchange transfusion is the current mode for treating neonatal Hyperbilirubinemia and preventing any neurologic damage ***(Cohen et al., 2010).***

The quality of nursing care refers to the appropriate execution of assessments and interventions intended to optimize neonate's outcomes, prevent adverse events and focus on neonatal safety issues ***(Clarke, 2004).***

Quality nursing care is widely used in health care with ambiguity and subjectivity. Evaluating and measuring quality is often a factor of an individual's knowledge and awareness, expectations and recognizable standards of quality. Quality is attributed to material production, people and characteristics. Quality achievement and determination in nursing has also been difficult owing to the multiplicity of client's wishes and varying standards of quality ***(Freitas, 2014).***

Quality of care is not an easy dimension to measure. Furthermore, there is no universal consensus on the optimal level of quality. Quality of care depends on human and

financial resources, professional standards, institutional standards as well as available structural attributes, such as equipment, technology, etc. These variables may differ between countries or institutions. The rapid pace of change and advances in technology are forcing health systems to constantly review quality standards. Medicine is highly innovative, so that 10% of practices recommended in 2000 are considered errors today (***Amalberti, 2012).***

Professional organizations operating in the health sector have a critical role in the definition of quality standards for each domain, which characterize the social mandates for each profession. These standards represent the desired global performance for nursing services, it can be tangible or intangible, general or specific, but always related to the targeted result. As essential references for nurses' performance, it provide parameters for service quality assessment. In agreement with some authors, service quality below the standard level is considered contrary to the knowledge developed in nursing care practices and the theoretical framework of nursing ***(Stallings-Welden and Shirey, 2015).***

Phototherapy is considered the most suitable and safe means of reducing serum bilirubin level. It would be preferable to use phototherapy when the bilirubin enters the skin at serum levels exceeding 80 mmol/l. The greatest effect of phototherapy is in the first 24 to 48 hours of its use. In the physiologic jaundice, it is estimated that, phototherapy will decrease the serum bilirubin level by 25% to 50% during the preliminary phase (**Ives, 2011**).

The role of nurses for neonatal jaundice is not only in educating the mothers, but also in identifying the signs and symptoms and also be able to manage neonates when bring to them. It is important for nurses to have basic knowledge which later can influence their attitude and practice regarding applicability of the standard care protocol to neonates with jaundice ***(Boo, et al., 2011).***

Significance of the study

According to the prevalence from Ain Shams Maternity & Gynecological Hospital and Cairo University Children Hospital at Monira (Abou El-Reesh), the admission rate of high risk neonates to the Neonatal Intensive Care Unit (NICU) in **2011** was 360 baby and 1153, and neonatal jaundice constitutes 33.3% and 54.3% respectively.