NURSING CARE FOR THE NEWBORN INFANT WITH JAUNDICE IN A MATERNITY HOSPITAL

ASSISTÊNCIA DE ENFERMAGEM AO RECÉM NASCIDO COM ICTERÍCIA EM UMA MATERNIDADE

ABSTRACT

Objective: to identify how the nurse cares for the newborn infant with jaundice. Method: this is a descriptive study with a qualitative approach conducted with 4 nurses from a reference maternity hospital in Mossoró, Rio Grande do Norte, Brazil. Data collection took place by means of recorded interviews, with a semi-structured script. The study was approved by the Research Ethics Committee, under the CAAE 0089.0.052.000-11. Results: through the analyzes of interviews, 3 categories emerged: 1) Knowledge on neonatal jaundice and its implications for the newborn infant; 2) Difficulties faced in the nursing care provided to the newborn infant with jaundice; and 3) Strategies to care for the newborn infant with jaundice. We noticed that the work process was not fully described by nurses. Conclusion: we found out that nurses do care for the newborn infant with jaundice, however, their speeches indicate that it still does not follow systematized steps. Descritores: Nursing Care; Nursing Process; Neonatal Jaundice.

RESUMO


RESUMEN

Objetivo: identificar cómo se realiza la atención del enfermero al recién nacido con ictericia. Método: este es un estudio descriptivo con abordaje cualitativo realizado con 4 enfermeros de una maternidad de referencia en Mossoró, Rio Grande do Norte, Brasil. Se recogieron datos con entrevistas grabadas, con un guion semi-estructurado. El estudio fue aprobado por el Comité de Ética en Investigación, bajo el CAAE 0089.0.052.000-11. Resultados: desde los análisis de las entrevistas emergieron 3 categorías: 1) Conocimiento acerca de la ictericia neonatal y sus implicaciones para el recién nacido; 2) Dificultades afrontadas en la atención a recién nacido con ictericia; y 3) Estrategias de atención al recien nacido con ictericia. Se notó que el proceso de trabajo no se describió plenamente por los enfermeros. Conclusión: se constató que los enfermeros proveen atención al recién nacido icterico, pero sus hablas indican que esa atención todavía no sigue pasos sistematizados. Descritores: Atención De Enfermería; Proceso de Enfermería; Icterícia Neonatal.

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INTRODUCTION

Neonatal jaundice is characterized by accumulation of bilirubin in the blood above 5 mg/dL and it may have a slow or rapid progression. It is the most frequent sign in the neonatal period and participates, in most cases, in a physiological process with benign evolution, usually without impairment of the newborn infant’s general condition. However, in some situations, it derives from a pathologic condition.¹

Thus, some risk factors are known to trigger the pathologic jaundice, such as prematurity, dehydration, breastfeeding, deficit of G6PD erythrocyte enzyme, blood incompatibility, medicalized births, and changes in the hepatic conjugation of bilirubin, due to polymorphisms of UGT1A1, may also contribute to increase the risk.²

The pathologic jaundice represents a major factor in neonatal morbidity and mortality, i.e., when care is improperly provided, it may cause repercussions to newborn infants affected by this pathology. Among the consequences, stand out: late diagnosis and Kernicterus (bilirubin-induced encephalopathy).³

In this sense, nurse’s work of in neonatology is a constant challenge; a neonatal jaundice case requires vigilance, skill, respect, and sensitivity, because the assisted patient is extremely vulnerable and highly dependent on the tem providing her/him with care.⁴

Thus, we prepared the following question: “How does the nurse care for the newborn infant with jaundice in a reference maternity hospital in Mossoró, Rio Grande do Norte, Brazil?”.

We assume that the care for a jaundiced newborn infant still does not follow all steps of a systematized care, however, it is assumed that there are obstacles which hinder putting the nursing process into effect.

The interest in addressing this theme stemmed from the discipline Nursing in the Newborn Infant’s Health, during the undergraduate Nursing course of Universidade Potiguar (UNP), by observing the high rate of newborn infants suffering from jaundice in the health care services during internships.

The study is justified by the need to increase knowledge about the nursing care provided to the newborn infant (NBI) with jaundice and, for this, it may be useful to know the way how the assistance offered by the nurse to the NBI with jaundice takes place in the various sectors of the maternity hospital. Its relevance lies on the possibility of obtaining more knowledge on the theme, besides providing an approach to the clinical reality of the nurse who deals with the newborn infant with jaundice.

This study will contribute to the service, the community, the university, and the undergraduate students, in order to allow the exchange of experiences, preparation of projects for change, and improvement in the quality of care for NBIs with jaundice.

OBJECTIVES

- To identify the way how care is delivered by the nurse to the NBI with jaundice.
- To identify the nurses’ idea on neonatal jaundice.
- To describe the difficulties presented by nurses during the provision of care to the NBI with jaundice.

METHOD

This is a descriptive study with a qualitative approach; in this type of approach, the material is analyzed in depth with regard to the history, social relations, and social organization of the environment, the cultural, symbolic, and subjective characteristics, evaluating opinions and perceptions of the subjects under analysis.⁵ The scenario was a reference maternity hospital in Mossoró, Rio Grande do Norte, Brazil.

The research subjects were nurses who work in the sectors Medium-Risk Maternity Ward (MRMW), Rooming-In Care (RIC), and Neonatal Intensive Care Unit (NICU). This study had the participation of 4 nurses; the inclusion criteria were: a) working in direct contact to the NBI; b) working in the sector MRMW, RIC, and NICU for more than 6 months; c) accepting to participate in the study. The exclusion criterion was being absent from the workplace due to vacation, work leave, or another reason.

Only those who were strongly determined to participate in the study were included into it, in order to comply with the precepts of the Resolution CNS 196/96.

The subjects were recruited through direct approach. Then, we agreed the appropriate time for reading and signing the free and informed consent term (FICT). By accepting and signing the FICT, we scheduled data collection and, according to the schedule, the research took place.

The instrument used for data collection was a semi-structured script for recording the interviews in mp4 device, applied to the nurses. This mode of interview should unfold the various indicators regarded as essential
and sufficient in topics which cover the information scope.\textsuperscript{5}

Data were obtained in November 2011, after approval by the Research Ethics Committee of UNP, under the CAAE 0089.0.052.000-11.

In the interview, we followed a script with predetermined questions to nurses, containing 3 specific points: knowledge about neonatal jaundice and its implications to the NBI; difficulties faced during care; and care strategies. We assigned letters and numbers to nurses’ testimonies, in order to ensure their anonymity.

In data analysis, we grouped the speeches which appeared more frequently, observing content in the thematic mode. This analysis consists in 3 stages: we quantified the words or sentences; in the repeated categories, the repetition of speeches is quantified; and we set up a counterpoint between the subjects’ speech and the bibliographic speech.\textsuperscript{5}

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\textbf{RESULTS AND DISCUSSION}
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Regarding the education level, all study participants reported having a Higher Education diploma. Age ranged from 25 to 35 years, thus showing up a group of young participants. All participants were female. The length of service ranged from 1 to 5 years.

The qualitative results were divided into 3 categories: knowledge about neonatal jaundice and its implications to the NBI; difficulties faced in nursing care for the NBI with jaundice; and strategies to care for the NBI with jaundice.

\textbullet Category 1 – Knowledge on neonatal jaundice and its implications for the newborn infant

When conceptualizing what jaundice is and the possible complications it may bring to the NBI, respondents make clear their understanding of the physiopathology of jaundice. In this regard, we think that, when the nurse presents herself at this level of understanding, she/he understands the steps required by an assistance aimed at the NBI with jaundice. The speeches below instantiate this understanding:

[...] Jaundice may be physiological or pathologic; pathologic is that observed in the first 24 hours of life, it is characterized as a yellowish skin, due to the non-combination of red blood cells by the liver. It may lead to liver failure or a hemolysis of red blood cells. (E1)

[...] Jaundice would be an increased bilirubin level, which leads to a yellowish skin color in the baby; this jaundice may be pathologic when occurring in the first 24 hours and physiologic when occurring between the 3\textsuperscript{rd} and 5\textsuperscript{th} day until the 7\textsuperscript{th} day [...] The increased bilirubin level can lead the baby to have neurological complications, hinder the issue of child’s psychomotor development, Besides leading to blindness; when these levels are not controlled, this baby can undergo a blood transfusion process, in order to try controlling this jaundice level. (E4)

 [...] Jaundice, with increased bilirubin, poses as major risks to the baby the neurological problem. (E2)

 [...] Jaundice is a disease which often affects the NBI; it may be mild, moderate or severe and lead to several factors, reach the neurological system, and, hence, baby’s irritability. (E3)

Whereas jaundice in the NBI is a pathology which is characterized by increased bilirubin in the blood, it is estimated that about 60 to 80% of NBIs acquire jaundice in the first days of life, thus, there is a need to recognize those who will require treatment, identify the risk factors, and prevent severe forms – these should be the objectives of monitoring NBIs with jaundice.\textsuperscript{8}

For this, there is the need for nurses to be qualified and trained to perform early detection of jaundice, as a way to provide an adequate nursing care, aimed at clinical recovery and prevention of future complications of the NBI.

Given the above, it is worth stressing that we still notice some gaps in the speeches presented above in terms of knowledge on jaundice, as the nurse must be scientifically supported with regard to the mechanisms responsible for the physiopathology and nursing interventions, as well as on the methods to be used so that nursing offers an adequate care.\textsuperscript{6}

Regarding the recognition of signs characterizing jaundice, it is evident that the respondents recognize the clinical signs of NBIs affected by this pathology; only one of them does not clearly indicate these signs. Some of them identify jaundice by means of laboratory tests, however, none cited a detailed physical examination of the NBI and a comprehensive approach to maternal history as a means of identifying jaundice and its possible causes. This fact may be evidenced in the following speeches:

[...] I identify jaundice in a newborn infant by the yellowish skin and through laboratory exams with increased rate of bilirubin. (E1)

[...] Through the too red skin pigmentation or the yellowish color, it is only detected
through examination, which is requested by the doctor. (E2)

Through the baby’s skin color. (E3)

[…] The first impression would be the yellowish skin color, [the identification] may be made by the entire multidisciplinary team. Laboratory tests are requested by the in-service physician, and, in this case, the examinations are total bilirubin and fraction, which will identify the direct and indirect bilirubin. (E4)

Thus, nursing care for the NBI with jaundice demands a comprehensive approach on the maternal and neonatal history and a detailed physical examination of the NBI, however, some participants in the study do not fully adopt the nursing care systematization (NCS). This fact is clear in the way they report identifying jaundice, just due to the yellowish skin, without recognizing what kind of jaundiced the NBI has and the possible behaviors to deal with each of them.

Based on this assumption, the professional who cares for more complex patients needs to be better prepared to operate in a safe and competent way during treatment, because the lack of theoretical/practical training often favors the occurrence of errors in the course of care and, hence, the failure of the action as a whole. From this perspective, nurse’s behavior in the assistance for the NBI with jaundice in the various sectors of neonatal care, MRMW, RIC, and NICU, demands a comprehensive approach to maternal and neonatal history and a detailed physical examination of the NBI.

According to this rationale, the way how the nurse recognizes the NBI with jaundice becomes a relevant aspect for his work. For this, authors discuss the need for a judicious physical examination of the NBI, determination of weight and gestational age, and observation of the general status, the activity, the reflexes, the presence of visceromegalies, encephalic hematomas, and petechiae, the study of maternal history and breastfeeding for the NBI, trying to keep away the chance of infection. Laboratory tests are tools used to provide a good quality care. Thus, we find out that most study participants understand the clinical signs presented by the NBI affected by jaundice.

♦ Category 2 — Difficulties faced in the nursing care provided to the newborn infant with jaundice

Regarding the difficulties reported by participants, there was a predominance of insufficient amount of phototherapy in face of the high demand of NBIs who need treatment, however, some people pointed out as difficulties NBI removal from phototherapy for breastfeeding, the lack of a specific neonatology laboratory, insufficient amount of human resources for fixing the equipment, and non-compliance with phototherapy breaks, related to daily life’s rush. This situation is exposed below:

A temporary interruption of phototherapy, for breastfeeding. […] The great demand of babies with jaundice and the insufficient amount of devices […] Regarding assistance, there is a need for a lot of attention with procedures, with that break, due to the daily life’s rush, we do not notice how long the baby was kept in phototherapy. (E1)

The use of equipment, due to the big demand and because the ICU is the only one in Mossoró […] Now, we have 6 children with jaundice and only 3 devices. (E2)

[…] There is no specific laboratory for newborn infants, when we collect blood, the amount is excessive. In a laboratory specific to neonatal individuals, a drop is enough to quantify… Here, it is not, we need half of a small tube with blood every 2 days. (E3)

[…] Another problem is the lack of human resources to fix the equipment… Regarding team care, the staff understands very well the procedures required by the baby with jaundice, eye protection, water control, reduction of clothes, weight control. (E4)

Besides ensuring nurse’s work, it is necessary that motherhood is provided with appropriate materials and equipment, so that their absence may be regarded as a significant gap.

This issue leads us to highlight the need for routine work, the implementation of preventive measures, consisting of human resources, materials and equipment, administrative and technical staff, taking into account essential factors for a qualified assistance.

♦ Category 3 — Strategies to care for the newborn infant with jaundice

Regarding the strategies to care for the NBI with jaundice, most respondents showed to know the indispensable procedures and presented herself as a co-participant in this process as a nurse. However, a respondent does not make clear her understanding on these procedures, since she attributes as a procedure to care for the NBI undergoing phototherapy only eye protection. The same participant expresses in her speech a relevant point for analysis, by clarifying she does not treat jaundice, today, through blood exchange transfusion, she prefers working with prevention. This idea is made evident in the statements below:
... Diet administration, water control, temperature control, attention to baby's hydration, hygiene, because sometimes the skin is flaky, eye protection, put the baby as exposed as possible, reduce the diaper size, change position, many are active, then, they usually move in bed by themselves, put the baby next to the mother if she/he is not undergoing oxygen administration, remove eye protection to provide eye care, protect the genitals, check vital signs. (E1)

Treatement depends on the type of jaundice and phototherapy may be provided by means of bilir- spot, bilir-tran, bilir-cradle, or blood exchange transfusion, no longer used because we try to work to prevent... eye protection is aimed at avoiding any damage. (E2)

 [...] Look at the device radiation, whether it is operating in a proper way, at most 30 cm away from the baby, put the goggles. (E3)

 [...] Eye protection continues for prevention of retinopathy, reduce clothes so that the entire body area is free to allow the incidence of this light, providing water balance in order to prevent dehydration, check vital signs, observe the color of stools and urine, check laboratory tests, direct and indirect bilirubin. (E4)

Guided by this assumption, to guarantee a good quality care to the NBI with jaundice, the nurse needs to be aware of the procedures related to phototherapy, as well as undress the baby, protect her/his eyes with a dark blindfold, remove eye protection during bathing and diaper exchange, accurate water balance, observe frequency, appearance, and quantity of eliminations, check irradiance at each shift, and, where the focus is repositioned, check temperature every 2 or 3 hours, exchange decubitus every 2 hours, promote gastrointestinal motility, through feeding and stimulation of bowel movements, as well as observe changes in the skin exposed to the phototherapy, not using oily substances, lotions, or balsams.8

Nurses must be attentive when caring for babies with jaundice, by monitoring the bilirubin levels, identifying children at risk of developing severe hyperbilirubinemia, and implement an effective treatment prescribed, whenever indicated.1

Thus, nurse's behavior when caring for the NBI with jaundice in the various sectors of neonatal care, MRW, RIC, and NICU, demands a comprehensive approach, where nursing need to share with the other members of the health care team the early detection and identification of this pathology, with constant surveillance of the NBI and evaluating the results of laboratory tests, such as: total bilirubins and fractions, complete blood count, and reticulocyte, maternal and NBI's blood typing, maternal indirect Coombs test and the NBI's Coombs test.4

Given these discussions on nursing care for the NBI with jaundice, we stress that it is of paramount importance implementing the NCS in the maternity hospital sectors, since the use of NCS could increase the quality of care offered, contributing to a comprehensive care to the patient and her/his family, leading it to participate in the provision of care.15

Other studies have discussed teamwork, and they indicate continued education as a basis for continued learning as a needed condition for the subject's growth, with regard to her/his self-improvement, aimed at the search for personal, professional, and social competence, as a goal to be pursued throughout her/his life.12

Another mode to be discussed in the same category is the way how nurses advise parents and the nursing team with regard to the care for NBIs with jaundice, due to its importance for NBI's growth. The speeches bring some discrepancies, because some individuals mention they advise parents, others report guiding parents only when they seek information.

We notice in the speeches that some discourses bring a relevant point for reflection, when reporting guidelines that parents are able to understand with regard to the care provided to a baby with jaundice. Overall, the divergent discourses bring approaches to the difficulties faced when assisting the NBI with jaundice, however, no speech mentioned difficulties related to teamwork:

When parents arrive and the baby is in need of phototherapy, we explain why the baby needs that treatment, which kind of treatment is that, how long she/he will probably stay in that device, which procedure we need to provide that baby with... As for the team, we advise with regard to all procedures. (E1)

 [...] The father, the mother, when seeking to know why the child is using phototherapy... If possible, we show the exam and speak of the need for the baby to undergo phototherapy. (E2)

 [...] We explain so that parents understand. When the baby comes home straight away, we advise to provide the sun bath, very early in the morning and late afternoon, with the baby naked. (E3)

We always try establishing a bond with parents, embracement, accountability, trying to conduct a comprehensive health care both with the newborn infant and with all people involved in care, offering...
information to these parents with regard to what jaundice is, how it can be treated, what are the strategies used to protect the baby from this incidence of excessive light, we inform parents about care [...] As for the team, all of them were trained to be here, then, there is no one here who is a lay person with regard to the subject. (E4)

We notice in the speeches of some respondents a relevant point for reflection, when the respondent reports advising only if parents try to get some news about the NBI. The others focus on the various advices to parents.

A study showed that mothers’ physical, emotional, and learning need were rarely met. Nurses are the health care professionals who have more contact with new mothers and, therefore, they should remain updated for providing proper care. Much needs to be done to help the mothers who have babies with neonatal jaundice. Families need professionals who ensure helping to face this problem.

So, it becomes interesting to report that when the NBI is admitted to the ICU, she/he is taken away from the care provided by her/his parents; this distance arouses feelings of anxiety and doubts on the part of parents, who, at that moment, lose, in a certain way, the direct contact with their child, and the nursing team needs a proper planning of actions, involving parents in the care process, in order to strengthen affective bonds and estimate a better evolution of this condition. Following this line, it is pertinent to stress the guidelines to parents about the therapy of a NBI with jaundice, nursing must intervene in the provision of guidance to parents on jaundice and its possible risk by means of verbal or written material.

Thus, the nurse needs to check family’s understanding of jaundice and the modes of treatment, in order to reduce anxiety and ensure its cooperation for monitoring the baby. According to this rationale, it is understood that being a nurse who works with neonatology requires skill, competence, and, above all, sensitivity to reach a systematic nursing care. We hope that the unveiling of this study may recommend some care measures to be adopted, such as the integration between staff and management, enabling the expansion of material resources, continued health education, and preparation of protocols to guide the care which will be provided.

REFERENCES


FINAL REMARKS

The results obtained in the study confirm our assumption, i.e. care for the NBI with jaundice still does not follow all steps of a systematic assistance, since the speeches bring strategic points of care which do not meet the NCS patterns.

Through the analysis of speeches, we observed that the work process was not fully described by nurses; this fact leads us to insights on the nurse’s work processes, identifying through testimonies that these professionals still face difficulties for involving the NCS in their work process during the execution of activities.

In this context, it became evident that the nurse shows her/himself as a key element so that there is an effective treatment of neonatal jaundice, for this, the nursing consultation should cover the steps of nursing process and correlate them to the evaluation and maintenance of devices, as well as the training of the nursing team.

As a way of rethinking assistance, we recommend some care measures to be adopted, such as the integration between staff and management, enabling the expansion of material resources, continued health education, and preparation of protocols to guide the care which will be provided.


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