



CARE AND MAINTENANCE OF PREMATURE NEONATE SKIN INTEGRITY
CUIDADO E MANUTENÇÃO DA INTEGRIDADE DA PELE DO NEONATO PREMATURO
CUIDADO Y MANTENIMIENTO DE LA INTEGRIDAD DE LA PIEL DEL NEONATO PREMATURO

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ABSTRACT

Objective: to describe Nursing care in maintaining premature newborn's skin integrity within a Neonatal Intensive Care Unit (NICU). **Method:** this is a qualitative, exploratory, descriptive study carried out in a reference maternity hospital, with 11 nurses working at the NICU. The data was collected by means of a semi-structured recorded interview, and later the speeches were transcribed and analyzed by the Content Analysis technique, in the Categorical Analysis modality. **Results:** the data collected was analyzed and distributed in two categories: Nursing Care to the premature neonates in the NICU and Nursing Care in the maintenance of the skin integrity of the premature newborn in the NICU. It was evidenced, from this research, that Nursing is fundamental in caring for premature neonates, and that the team performs several procedures regarding the prevention of skin lesions in babies, developing a humanized work. **Conclusion:** it is believed that this study may contribute to the knowledge of health professionals regarding the risk to which the premature newborn is exposed in the development of skin lesions when hospitalized in NICU, in order to contribute to the neonatal and humanized quality care. **Descriptors:** Nursing; Premature; Skin; Nursing care; Neonatal Intensive Care Unit; Comprehensive Health Care.

RESUMO

Objetivo: descrever o cuidado de Enfermagem na manutenção da integridade da pele do recém-nascido prematuro dentro de uma Unidade de Terapia Intensiva Neonatal (UTIN). **Método:** trata-se de um estudo qualitativo, exploratório, descritivo, realizado em uma maternidade de referência, com 11 enfermeiros que atuam na UTIN. Coletaram-se os dados por meio de uma entrevista gravada semiestruturada, e, posteriormente, as falas foram transcritas e analisadas pela técnica de Análise de Conteúdo, na modalidade Análise Categorical. **Resultados:** analisaram-se e distribuíram-se os dados coletados em duas categorias: Assistência de Enfermagem ao neonato prematuro na UTIN e Cuidados de Enfermagem na manutenção da integridade da pele do recém-nascido prematuro na UTIN. Evidenciou-se, a partir desta pesquisa, que a Enfermagem é fundamental no cuidar dos neonatos prematuros, e que a equipe realiza diversos procedimentos no que diz respeito à prevenção de lesões de pele nos bebês, desenvolvendo um trabalho humanizado. **Conclusão:** acredita-se que este estudo possa contribuir para o conhecimento dos profissionais de saúde em relação ao risco ao qual o recém-nascido prematuro está exposto no desenvolvimento de lesões de pele quando internado em UTIN, de forma a contribuir no cuidado neonatal humanizado e de qualidade. **Descritores:** Enfermagem; Prematuro; Pele; Cuidados de Enfermagem; Unidade de Terapia Intensiva Neonatal; Assistência Integral à Saúde.

RESUMEN

Objetivo: describir el cuidado de enfermería en el mantenimiento de la integridad de la piel del recién nacido prematuro dentro de una Unidad de Terapia Intensiva Neonatal (UTIN). **Método:** se trata de un estudio cualitativo, exploratorio, descriptivo, realizado en una maternidad de referencia, con 11 enfermeros que actúan en la UTIN. Se recogieron los datos por medio de una entrevista grabada semiestruturada, y posteriormente, las palabras fueron transcritas y analizadas por la técnica de Análisis de Contenido, en la modalidad Análisis Categorical. **Resultados:** se analizaron y se distribuyeron los datos recogidos en dos categorías: Asistencia de Enfermería al neonato prematuro en la UTIN y Cuidados de Enfermería en el mantenimiento de la integridad de la piel del recién nacido prematuro en la UTIN. Se evidenció, a partir de esta investigación, que la Enfermería es fundamental en el cuidado de los recién nacidos prematuros, y que el equipo realiza diversos procedimientos en lo que se refiere a la prevención de lesiones de piel en los bebés, desarrollando un trabajo humanizado. **Conclusión:** se cree que este estudio puede contribuir al conocimiento de los profesionales de salud en relación al riesgo al que el recién nacido prematuro está expuesto en el desarrollo de lesiones de piel cuando es internado en UTIN, para contribuir en el cuidado neonatal humanizado y de calidad. **Descritores:** Enfermería en Salud Comunitaria; Desprendimiento Prematuro de la Placenta; Apósitos Biológicos; Atención de Enfermería; Unidades de Cuidado Intensivo Neonatal; Atención Integral de Salud.

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INTRODUCTION

It is known that gestation has an average duration of 280 days, about 40 weeks; therefore, preterm newborns are those born with a gestational age of less than 37 weeks, and can be classified according to gestational age, with birth weight or adequacy to gestational age. It should be noted that such age is based on the date of the last menstrual period, at the height of the uterus, at the beginning of the fetal movements, at the insinuation and fetal biometry presented by ultrasonography.¹

It is reported that risk factors related to preterm births are diverse and include malformations of the uterus, alcoholism, smoking, drug use, diabetes, Rh incompatibility, as well as early pregnancies of adolescents, or late pregnancies in women over 37 years, with hypertension being the most frequent cause and defined as high risky pregnancy.²⁻³

It should be noted that, according to data, just in 2012, 20 million preterm and low birth weight babies were born and, of these, one third died before reaching one year of age. It is revealed that there were 14.9 million preterm births worldwide, which corresponds to 11.9% of live births; in the United States, the incidence was 12.0% of live births and has been increasing in recent decades, and in Brazil, 12.4% (344,000) of the slightly more than 2.9 million births are premature, are born 931 premature babies per day, the equivalent of 40 per hour, the Brazilian index being twice that of European countries.³⁻⁴

It can lead, due to general immaturity, to dysfunction in any organ or body system and the premature neonate can also suffer compromise or interurrences throughout its development. Thus, the Neonatal Intensive Care Unit (NICU) offers advanced technologies for the improvement of the premature baby, with increasingly modern interventions for quality care.⁵

It is believed, in this context, that Nursing focuses on caring for the individual and, in the neonatal area, care is focused on the newborn (NB) and its peculiarities, a fact of constant concern in the Neonatal Hospitalization Unit (NHI) and should therefore be a priority in nurses' actions, and skin is part of this daily care, since it is a protective barrier against external agents.⁶

The newborn's skin is an important barrier to prevent loss of water and maintain homeostatic balance, because at birth, the skin of the newborn is surrounded by a caseous vernix, a lipid barrier that protects

the skin of the intrauterine baby. It makes the pH of the newborn's skin acid and thus in four days is colonized with the vaginal flora, and this acidity is necessary to protect it against aggressive pathogens. It complements emphasizing that, at two weeks of life; the skin is completely keratinized and ready to resist the absorption of toxic substances.⁷

Intensive care of newborns is presented as a challenge to the nursing team to maintain the integrity of the baby's skin because of the need to securely attach the endotracheal tube, sensors, probes, catheter venous infusion and other materials on the immature skin, without causing severe lesions, since the presence of lesions represents a complicating factor in establishing the neonate's health.⁸

The mission of giving back to families and to society, the healthy newborn with its functions preserved, in a full way, is shown as a great challenge for health professionals, especially for Nursing, and the imprecision on how far the efforts of the professionals working in this area can and should focus to keep the lives of the small patients is one of the most difficult slippery terrain to make the right decisions.⁹

OBJECTIVE

- To describe nursing care, in maintaining the integrity of the premature newborn's skin, in the Neonatal Intensive Care Unit (NICU).

METHOD

This is a qualitative, exploratory, descriptive study whose study scenario was the Neonatal Intensive Care Unit (NICU) of a reference maternity unit located in the city of Teresina-PI, and the research was approved by the Research Ethics Committee of the Teresinense Teaching Association SC LTDA under the opinion of number 1,725,975.

This study was carried out with the participation of 11 nurses who work in the Neonatal Intensive Care Unit of the referred maternity unit, respecting the ethical issues of Resolution 466/12, which regulates the research guidelines and norms involving the research participants, their rights and duties, clarifying and explaining the procedures used in the research.

Participants signed the Free and Informed Consent Term and, as a guarantee of anonymity, each of them was assigned pseudonyms of names of roses, since these are considered by many people as the symbol of beauty and of love, because of their specific delicacy and aroma, and Nursing has a specific and individual way of caring and, when

referring to neonatology, such professionals must be delicate in this care for the accomplishment of humanized assistance.

The data was collected through a semi-structured interview, and after the consent of the subjects, the interview was recorded with a Music Player 4 (MP4), and later the speeches were transcribed and the recordings were archived. An initial visit was made to the NICU in question, where the objectives of the research were informed, with verification of the scale of the sector, and the number of nurses working in it was raised, so that the interviews were previously scheduled and recorded.

The Content Analysis technique was used for data analysis, which consists of the steps of preanalysis, analytical description, evidencing the categorization, and inferential interpretation. Data analysis was performed by the transcription of the interviews in full and the speeches were organized into categories by content similarity, proceeding

to the pre-analysis. The material was subsequently organized, composing the research and analyzing the content through the categorization of the data.¹⁰

After the interviews and their transcriptions, a reading of the participants' statements was carried out, trying to absorb their experiences on the subject. The data was grouped, contextualized, analyzed and distributed in two categories: Nursing Assistance to the premature neonate in the NICU and Nursing Care in maintaining the integrity of the skin of the premature newborn in the NICU.

RESULTS

The profile of the study participants is shown in table 1 and, thus, allows a better understanding of the testimonials presented in this study.

Table 1. Characterization of study participants. Teresina (PI), Brazil, 2016.

| Code | Sex | Age | Qualification |
|-----------------|--------|-----|----------------------|
| Lancashire Rose | Female | 29 | 4 years and 8 months |
| Alba rose | Female | 34 | 11 years |
| Rose | Female | 53 | 20 years |
| Milky rose | Female | 40 | 11 years |
| Rose hip | Female | 48 | 15 years |
| Shrub rose | Female | 23 | 2 years |
| Mussaenda-rose | Female | 37 | 12 years |
| Mini rose | Female | 36 | 6 years |
| Saron rose | Female | 29 | 5 years |
| Desert rose | Female | 45 | 22 years |
| Yellow rose | Female | 43 | 15 years |

It should be noted that all participants were female; the age ranged from 23 to 53 years; the duration of the NICU was one to ten years, and in relation to the marital situation, three were single and five were married.

Eleven nurses working in the NICU of the hospital under study were interviewed. The aim of this study was to describe, through the testimonies of the nurses, the assistance they provide to the neonate and the care taken in the maintenance and integrity of the skin of the premature neonate for the prevention of skin lesions in preterm newborns.

The results are presented descriptively in two categories of analysis.

◆ Nursing care for the premature neonate in the NICU

It is reported that in this category the nurses interviewed portray the care of preterm infants, having seen that the

therapeutic plan for premature newborns is sometimes time-consuming and requires that the same goes through a long hospitalization process.

Nursing care planning and release to severely ill NBs is a very complex and careful process that requires careful evaluation to determine the efficacy of both medical and nursing therapy. It is observed that there is this evaluation in the speech of some interviewees.

The main assistance that we give to the premature neonate here in the ICU is to evaluate, to make the physical examination [...]. [...] we evolve, make history on arrival, make the diagnosis [...]. (Milky rose)

[...]we make an evaluation, complete assessment of the patient, we make evolution and see, of course, the inspection of the skin of the RN [...]. (Rosehip)

It can be seen from the nurses' statements that they provide care, from the admission of the baby to the time of discharge, by performing procedures that improve the health status of the premature newborn in the NICU, such as such as the passage of probes, collection of exams, more complex dressings, central venous catheter insertion (CVCI), administration of medication, as can be seen in the following fragments.

We are responsible for performing bladder catheterization and what we do here is the orogastric, which is our responsibility, we do the exchange of catheter every three days and the catheter according to the medical prescription, we do dressing, CVCI, which is the central peripheral insertion catheter [...]. Lancashire rose)

[...]the care that is exclusive to the nurses, which are: dressing application, tube exchange, CVCI passage, dressing exchange (Rosehip)

We monitor, host, vigorously control temperature, aid and / or installation of invasive and non-invasive monitoring, for example, orotracheal tube (OTT) and noninvasive ventilation with positive pressure (NIV). (Mussaenda-rose)

When he arrives, we will warm him up, check the temperature, the blood glucose, the hydration, whether to suck or not, basic care, access, collection of material for examination [...]. (Shrub Rose)

It is noted that even with the use of CVCI, the catheter that reduces the number of venous punctures in the preterm newborn, the nurse must be careful to avoid a possible infection, since the baby had its integrity of the skin ruptured and, therefore, a gateway for infections is formed, therefore an evaluation and monitoring of the insertion of this catheter is necessary, observing any eventuality that may directly interfere with the baby's health.¹²

• Nursing care in maintaining the integrity of the premature newborn's skin in the NICU

Care is taken of the skin of the preterm newborn (PTNB) as a constant concern of professionals working in the Neonatal Intensive Care Unit, which is initiated soon after birth in order to maintain an ideal body temperature and contribute significantly to a successful adaptation.⁸

The care of the preterm newborn requires specific care, especially when hospitalized in a Neonatal Intensive Care Unit. This assistance is reported in nurses interviewed when referring to AGE administration, sunflower oil for dry skin, use of hydrocolloid, rotation of the oximeter, application of transparent film,

use of tensoplast, all this to maintain the integrity of the skin of this premature newborn in the NICU.

[...]is evaluating the skin, seeing if it is progressing to injury, if it is not, try to intervene before injuring, basically this is [...]. (Milky rose)

[...]know how to position the baby, position it in a position that is more comfortable, that is more comfortable for the baby, [...] see if its positioning is adequate for mechanical ventilation, if the wire is not pulling, ensure ventilatory intubation within what is our function, see if the devices are well connected, see if it is responding well, if any, if the sensor is well placed [...]. (Saron rose)

[...]he sometimes gets a little dry, so our care is to administer AGE [...]. The plaster is very coarse for the baby's skin, so we use hydrocolloid, we put two balls of hydrocolloid, one on each cheek, and then, on the hydrocolloid plate, we put the tape to fix the tube. In clamping the tube, we use a material called a tensoplast, which is a tissue with adhesive, so it damages the skin less [...]. Lancashire rose)

[...]the care with the sensors because, as the baby has very thin skin, even the sensor itself can injure the skin, the oximeter sensor, the identification bracelet, we have to be careful with it because its edge can sometimes hurt, have to leave loose, careful with the temperature of the incubator, né, which is also one of the reasons for skin damage [...]. Alba rose)

It is noticed, before the reports, how the nurses emphasize the importance of performing procedures with delicacy in the manipulation of the skin of the premature newborn, protecting it from injuries and aiming at maintaining its function as a barrier.

DISCUSSION

It is necessary, therefore, that the preterm newborn has excellent care, and for this, Nursing uses the Nursing Care Systematization (NCS), whose importance is fundamental, since the qualified assistance should not be limited to guarantee the survival of the premature, but also to plan expected responses and actions and implement them according to the care needs.¹¹

Thus, according to the aforementioned authors, through the NCS, by the Nursing team, one can assist the newborn and his / her relatives, reducing the degree of anxiety and stress among them, besides favoring the mother-baby cuddle and the experience of paternity, with the incorporation of care centered on the family of the baby hospitalized in NICU.

Care should be taken with the skin of the NB to be a priority, continuous and dynamic, throughout its permanence in the unit, whether in direct or indirect care with the client. It is essential to ensure adequate nursing care for the newborn, to meet needs such as nutrition, hygiene, change of position, medications and stimulation, which require direct and continuous contact, which are imbricated to the skin's primary care.⁶

It is thus clear that practitioners use methods to improve skin integrity or even prevent a possible break in it, and the use of hydrocolloid, polyurethane, silicone, and other skin-protective dressings may be an alternative both to protect the skin from pressures by the use of devices, and to prevent lesions by removal of adhesives. The trauma is reduced by them, and they must be placed between the skin, the device and the adhesive, providing a protective skin barrier.¹⁴

It is believed that the benefits of the topical application of oils, whether petrolatum, sunflower or canola, serve as protection of the integrity of the extract corneum, strengthening the function of skin barrier, increased hydration of the same and the consequent decrease of infections in premature infants and improved nutrition through percutaneous absorption of lipids.¹⁵

With the use of this central catheter, premature newborns will have a lower risk of infection because they are handled minimally, reducing exposure to multiple vascular punctures, providing less stress, reducing painful experiences, discomfort, skin lesions, often through infiltration of solutions, hairy preservation of the newborn and increased quality of life during the period of hospitalization at the NICU.¹²

It is pointed out that the insertion and maintenance of the central venous catheter for peripheral insertion is a function that the nurse can do, since, according to COFEN Resolution 258/01, Art. 1, "It is lawful for the Nurse, the insertion of Central Peripheral Catheter "and, in Article 2," The Nurse for the performance of such activity, must have undergone professional qualification and / or qualification".¹³

This competence is required in this way: more in-depth knowledge and skills for insertion, handling and maintenance; analysis of the risks and benefits of the procedure; recognition of applicable ethical-legal issues; assessment and knowledge of the need for treatment of possible complications. It is added that the use of the procedure is increasing, because this is the most effective alternative in the medium for the

maintenance of deep and prolonged venous accesses in high risk NBs.¹²⁻³

With regard to the fixation of the devices, it should be done in a cautious way, with materials indicated for each case, so that they are securely fixed and, when removed, cause less damage to the skin of the newborn. The micropore is thus indicated as an adhesive source, but in this, as in any other adhesive, it is necessary to use on a thin layer of hydrocolloid or transparent film previously applied to the skin of the premature to reduce or even prevent possible skin lesion, and all these actions require, from the nurse, accuracy and dexterity in the management of the newborn's skin.¹⁵⁻⁶

It is necessary, therefore, that the professionals are training, developing measures to optimize the survival of the premature newborn, in addition to implementing decisions in certain situations of risk, in the sense of preventing or, at least, minimizing damages to these patients. It is believed, therefore, by the development of a humanized work, considering the patient as an individualized being, which is an efficient strategy in neonatal care.

CONCLUSION

In this study, it was shown that Nursing is directly linked to the care of the preterm newborn, being of great importance in the recovery and improvement of the health of the preterm infant in the NICU, since its professionals seek to provide a holistic and humanized, respecting the limitations of the newborn, performing the most diverse procedures and using appropriate techniques such as the use of adhesives, oils, among others, to perform necessary procedures with skill to avoid injuries and, thus, increase the fragility of this baby.

It is observed that Nursing takes care of the patient, from its entry into the sector, until its discharge, with different procedures, be the change of decubitus, the collection of materials for examinations, the passage of CVCI, of probes, the exchange of diapers, the positioning of the baby in the incubator, the accomplishment of phototherapy, puncture of accesses, among others. Such procedures are carried out with special care, as the professionals try to minimize the consequences arising from them.

It is believed that this study may improve the knowledge of health professionals regarding the care provided to the premature neonate and the Nursing care in the maintenance of skin integrity in the Neonatal Intensive Care Unit, in addition to providing

subsidies for these and other professionals to reflect on the interventions and difficulties encountered during the accomplishment of this assistance, in order to contribute to the success of a neonatal humanized and quality care. It is also possible, through this research, to have the theoretical basis for the development of Nursing assistance to the premature neonate, especially regarding skin care of the preterm newborn in the NICU.

It is necessary, however, to invest in the training of professionals in the NICUs, promoting not only the technical training, but also the sensitizing them to plan the assistance based on the fundamentals of humanization and integral care.

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Chaves ACF, Santos AP, Ataíde KMN et al.

Care and maintenance of premature neonate...

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