

Care to the extreme premature: minimum handling and humanization

Cuidado ao prematuro extremo: mínimo manuseio e humanização¹

Atención para prematuros end: manejo de mínima y humanización

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How to quote this article:

Marques LF, Ribeiro RV, Rocha CR, Carreiro MA, Santiago LC. Care to the extreme premature: minimum handling and humanization. Rev Fun Care Online. 2017 out/dez; 9(4): 926-930. DOI: <http://dx.doi.org/10.9789/2175-5361.2017.v9i4.926-930>

ABSTRACT

Objectives: To analyze the publications about the risks of excessive handling in extremely premature infants, and suggest ways to care for them that prioritizes minimal handling at the expense of an established routine without an individualized assessment. **Method:** A descriptive and exploratory research, of qualitative approach with an integrative review. Fifteen articles were selected, which were subdivided into two categories: humanized assistance and individualized care. **Results:** The studied articles addressed the humanization and mother-infant bond, in the quest for individualized care that minimizes the consequences resulting from the time of hospitalization related to prematurity, but that does not relate specifically to the minimum handling assistance. **Conclusion:** The lack of research in this specific area sets up a gap in care that could reduce numerous injuries to premature newborns. The most essential measures, such as a gentle care with minimal handling and respecting the timing of each newborn should be subject to more scientific studies.

Descriptors: Premature, Neonatal intensive care units, Humanization of assistance.

RESUMO

Objetivos: Analisar as publicações sobre os riscos do manuseio excessivo em prematuros extremos, e sugerir formas de cuidados ao prematuro extremo que priorize o mínimo manuseio em detrimento de uma rotina estabelecida sem uma avaliação individualizada.

Método: Pesquisa descritiva e exploratória, de abordagem qualitativa com revisão integrativa. Foram selecionados 15 artigos, que se

¹ Without financial aid. Prepared from the monography: "Individualized care to the extreme premature: minimal handling and humanization", 2013 from Universidade Severiano Sombra - USS.

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subdividiram em duas categorias, assistência humanizada e o cuidado individualizado. **Resultados:** Os artigos estudados abordavam sobre a humanização e o vínculo mãe-bebê, na busca por um cuidado individualizado que minimizem as conseqüências advindas do tempo de internação relacionado com a prematuridade, mas não versam especificamente sobre o mínimo manuseio na assistência. **Conclusão:** A ausência de pesquisa nesta área específica configura-se uma lacuna na assistência que poderia reduzir inúmeros agravos ao prematuro extremo. As medidas simples mais essenciais, como um cuidado delicado com mínimo manuseio, respeitando o momento de cada recém-nascido deveriam ser objeto de mais estudos científicos.

Descritores: Prematuros, Unidades de terapia intensiva neonatal, Humanização da assistência.

RESUMEN

Objetivos: Analizar las publicaciones sobre los riesgos de manipulación excesiva en los bebés prematuros, y sugerir maneras de cuidar de los recién nacidos extremadamente prematuros que prioriza la manipulación mínima a costa de una rutina establecida sin una evaluación individualizada. **Método:** Estudio descriptivo y exploratorio, con enfoque cualitativo revisión integradora. Se seleccionaron 15 artículos, los cuales fueron agrupados en dos categorías, la atención humanizada y personalizada. **Resultados:** El estudio abordó artículos sobre el enlace humanización y la madre lactante, en la búsqueda de una atención individualizada que minimizar las consecuencias resultantes del tiempo de hospitalización relacionada con la prematuridad, pero no se refiere específicamente a la asistencia mínima manipulación. **Conclusión:** La falta de investigación en esta área específica establece una brecha en la atención que podría reducir los recién nacidos prematuros para numerosas lesiones. Las medidas individuales más esenciales, como un cuidado suave con una manipulación mínima, respetando el calendario de cada recién nacido debe ser objeto de más estudios científicos.

Descriptores: Prematuros, Unidades neonatales de cuidados intensivos, Humanización de La atención.

INTRODUCTION

Interest in the study arose during my experience as a nurse in a Neonatal Intensive Care Unit (NICU), by observing that the routines established to take care of extremely premature infants overrides individual care assessment in order to prioritize the minimum handling and thus prevent the consequences of excessive manipulation. This concern transcends the hospitalization period, as many sequels alter the quality of life after the discharge from the NICU.

According to the Brazilian Institute of Geography and Statistics (IBGE in Portuguese), survey data on the number of annual live births by birth place, from 2003 to 2010, given the absolute geographic coverage data of Brazil, totalized in 2003 2,822,462 live births and in 2010, 2,760,961, showing a slight decline in birth rates in Brazil. A World Health Organizations (WHO) report reveals that 15 million babies are born prematurely in the world. In Brazil, 279,300 babies are born prematurely per year.

According to data from the Live Births Information System (SINASC in Portuguese) of the Ministry of Health, the percentage of premature live births in 2010 was 7.1%,

corresponding to 204,299 of live births for mothers with less than 37 weeks of gestation.

Upon severe clinical prematurity, many infants require specialized monitoring of a multidisciplinary team in the post-discharge in the early years of life, in order to detect early changes in the development, parental guidance and family needs, with follow-up service, but due to the inexistence of this program in several treatment centers, the identification and care of several changes in these premature infants are deficient.¹

Hence, premature newborn infants (PNIs) are different from NIs in term, because they have different anatomical and physiological characteristics², according to the birth weight lower than 2000g and according to gestational age (GA), less than 30 weeks.³ Thus demanding greater sensitivity and specialized care.

These differences between the full-term newborns and PNIs leads us to believe that in daily NICU routine, we expose these PNIs to various stressful stimuli, including painful, where the meaning of the term occurs when there is a personal imbalance against environmental factors that cause mental and/or physical tension.⁴ In day-to-day, PNIs may present imbalances if exposed to painful and/or unpleasant stimuli, such as invasive procedures, noise, pain, disruption of sleep states, temperature changes and hunger⁵, which considerably alter the physiological pattern of a NI.

Thus, the object of the study is the excessive handling in the NICU and its consequences for the extremely premature infant. In the NICU, newborn infants are handled, on average, every three hours or more. In this scenario we raised the following guiding questions: what are the consequences of excessive handling to the extreme premature? Is it possible to perform a minimal handling and provide to the extreme PNI an individualized care?

OBJECTIVES

Therefore, the study's objectives are: to analyze the publications that reference the risks of excessive handling on extremely premature infants. Suggest ways to care for the extremely premature infants that prioritizes the minimum handling at the expense of an established routine without an individualized assessment.

METHOD

This is an integrative review, in which a survey of scientific production concisely to the relevant data on the subject studied, in different places and times, allow the current knowledge and facilitate changes in clinical practice, implementation of interventions and reduce costs.⁶

To carry out this review, the following steps were taken: 1. Identification of the guiding question; 2. Establishment of inclusion and exclusion criteria; 3. Study categorization; 4. Evaluation of the included studies; 5. Interpretation of results and; 6. Review presentation.⁶

Data collection occurred from December 2012 to February 2013 and was conducted through online article searches that answer the following research question: what are the consequences of excessive handling to the extreme premature? Is it possible to perform a minimal handling and provide to the extreme PNI an individualized care?

Data collection was carried out in the virtual library Scientific Electronic Library Online (SciELO). The descriptors used in this research, indexed in Descriptors of Health Sciences (DeCS) were: premature, preterm, neonatal intensive care, humanization and premature, and premature and extreme, as well as their respective translations in English and Spanish.

As inclusion criteria, publications in the 2002-2012 period; Brazilian experiences; answer to the problem/goal and; addressed the handling and care on extremely premature infants were selected. Papers without abstracts available for analysis and studies that did not cover the research topic were excluded.

With the 'premature' descriptor, 26 studies were found and 6 were selected; with 'preterm', 1 article was found and selected; with neonatal intensive care, 12 articles were found and 3 were selected; with the descriptors 'humanization' and 'premature' associated, 2 articles were found and selected and the words 'premature' and 'extreme' returned 8 studies, of which 3 were selected. A total of 15 studies were selected for the research to answer the guiding questions.

For data collection, it was used a form already validated⁷, with information about the professional category of the authors, place and year of research, type of journal, title, type of study and level of scientific evidence. The information was extracted by exhaustive reading and re-reading of the publications, which were organized for data analysis. The methodological characteristics of the studies were analyzed with the classification of levels of evidence in six levels: I. meta-analysis of multiple controlled studies; II. Individual study with experimental design; III. Study with quasi-experimental design; IV. study with a non-experimental design as correlational and descriptive qualitative research or case study; V. Report cases or data obtained in a systematic, verifiable quality or program evaluation data; VI. opinion of respected authorities based on clinical competence or expert opinion committees.⁸

RESULTS AND DISCUSSION

Fifteen studies that reported a type of specialized and humane care of premature newborns were selected. The studies were grouped according to the author, title and year of publication, found in SCIELO database, as shown in Table 1 below. As for the force of evidence, 12 articles had level VI evidence, and only 3 of the articles had level V evidence. With regards to the professional category, the surveys were conducted by doctors, teachers and nurses working in the academic field as teachers and researchers, without scientific production by academics.

Table 1 - Articles selected between 2002 and 2012

Author	Title	Year of publication
Berezovsky A	<i>Maturação funcional da retina em bebês prematuros.</i>	2004
Khan RL, Raya JP, Nunes ML	<i>Avaliação do estado comportamental durante o sono em recém-nascidos.</i>	2009
Mendes I, Carvalho M, Almeida RT, Moreira ME	<i>Uso da tecnologia como ferramenta de avaliação no cuidado clínico de recém-nascidos prematuros.</i>	2006
Meio MDBB, Lopes CS, Morsch DS, Monteiro APG, Rocha SB, Borges RA, Reis AB	<i>Desenvolvimento cognitivo de crianças prematuras de muito baixo peso na idade pré-escolar.</i>	2004
Vasconcelos GAR, Almeida RCA, Bezerra AL	<i>Repercussões da fisioterapia na unidade de terapia intensiva neonatal.</i>	2011
Gorgulho FR, Pacheco STA	<i>Amamentação de prematuros em uma unidade neonatal: a vivência materna.</i>	2008
Fraga DA, Linhares MBM, Carvalho AEV, Martinez FE	<i>Desenvolvimento de bebês prematuros relacionado a variáveis neonatais e maternas.</i>	2008
Schmidt KT, Higarashi IH, Sassá AH, Marcon SS, Veronez M	<i>A primeira visita ao filho internado na unidade de terapia intensiva neonatal: percepção dos pais.</i>	2012
Costa R, Monticelli M	<i>Método mãe-canguru</i>	2005
Neves FAM, Orlandi MHF, Sekine CY, Skalinski LM	<i>Assistência humanizada ao neonato prematuro e/ou baixo peso: implantação do método mãe canguru em hospital universitário.</i>	2006
Neves PN, Ravelli APX, Lemos JRD	<i>Atenção humanizada ao recém-nascido de baixo peso (método mãe canguru): percepções de puérperas.</i>	2010
Maia FA, Azevedo VMGO, Gontijo FO	<i>Os efeitos da posição canguru em resposta a procedimentos dolorosos em recém-nascidos pré-termo: uma revisão de literatura.</i>	2011
Rugolo RMSS, Bentlin MR, Junior AR, Dalben I, Trindade CEP	<i>Crescimento de prematuros de extremo baixo peso nos primeiros 2 anos de vida.</i>	2007
Graziano RM, Leone CR	<i>Problemas oftalmológicos mais frequentes e desenvolvimento individual do pré-termo.</i>	2005
Suguihara C, Lessa AC	<i>Como minimizar a lesão pulmonar no prematuro extremo: propostas.</i>	2005

Source: SCIELO database.

After the selection, the articles were examined and characterized into two grouping categories: 1) Humanized Assistance and 2) Individualized Care.

Humanized assistance

This category was constructed by analysis of 6 of the 15 selected articles. After careful study, it can be observed that, due to the hospitalization of many premature infants, we face the question of idealization of a healthy and “chubby” baby, where parents are faced with another reality, one of a frail newborn with special care needs. We seek to comprehend the feelings and needs of parents on the first visit to the child in the NICU, improving our conducts in the reception, in this particular moment of their lives.⁹

Thus, for humanized care, we can contribute to the creation of a connection with skin-to-skin contact between mother and low weight baby, using the kangaroo mother method, which favors the bonding and encourages breastfeeding. Mothers who use kangaroo care were satisfied and feel inserted in the recovery of their baby. Even the mother’s presence to calm her child exposed to painful procedures displayed signs of decreasing the stress level, behavioral discomfort and is associated with decreased crying in pain response. The kangaroo mother method is considered a low-cost strategy and can be used as a non-pharmacological method to reduce pain levels in preterm infants¹⁰⁻³, and may be used by other family members as early as possible, such as the father and grandparents.

For the mother-baby approach to be complete, breastfeeding is necessary, being undoubtedly a challenge. We can help to stimulate this mother, even without the baby sucking in fact, by performing the milking technique and that the baby can benefit from this milk. Even if there is difficulty and discomfort, it is necessary because it is through the milking that a good milk production can be ensured.¹⁴

Individualized care

When conducting an analysis of the articles in this category, seven articles of the 15 selected were employed, which address individualized care to extreme premature, to minimize problems arising from hospitalization and no longer prolong their hospitalization period. Over time, there have been gains in technological aspects, however patients with similar clinical conditions can be treated with different levels of technological use, because their individualities response to treatment leads to an ongoing evaluation and determine whether or not the use is necessary. The technology has great impact on morbidities and on healthcare costs¹⁵, which contributes to survival of many premature babies, but does not eliminate the concern about the growth prognosis and development of these children¹⁶, showing great concern for the consequences arising from the time of exposure to prolonged treatment due to prematurity.

Among the individualized care, specialized care is essential for rapid and accurate diagnosis and even for

ambulatory follow-up of certain diseases. Ophthalmologic monitoring is being carried out between the fourth and sixth week of life of the newborn.¹⁷⁻¹⁸ This care is important because of the existing retinal immaturity in premature infants which can cause retinopathy of prematurity. So, we can minimize this process that can be natural or aggravated due to the lack of care, as for example, having special attention to the levels of oxygen therapy and brightness during hospitalization.

Upon certain studies, assessments of the behavioral state of sleep in infants were carried out, which identifies the degree of maturation and neurological impairment.¹⁹ Sleep for premature newborns is very important because it is during the rest that the newborn can mature and grow healthily. With individualized care, we must respect the sleep of premature babies, combining the handling, with other professionals when handling this premature and respect the individuality of each.

The neurological development of preterm infants at school age displays borderline intellectual development. Thus, a careful review of premature birth as a risk factor is necessary but not the only one.²⁰ The development of premature infants is related to verbal, motor, visual and hearing stimuli, among others. Several of these stimuli may be offered by their mothers. In a study, it was observed that the worst performance in motor items such as reaching an upright position and walking were related to lower birth weight and lower Apgar score index and may be associated with high levels of maternal anxiety and fear of exposing them to the floor, restricting motor stimulation.²¹ Membership in the outpatient segment is satisfactory in the first year of life, minimizing expectations at the end of the second year, by factors that begin to interfere, such as not residing in the municipality and family socioeconomic status.¹⁶

Therefore, a professional who has earned great influence in the NICU was the physiotherapist, who, with the passage of time, earned great recognition. A specialized care may be related to lower rates of respiratory complications derived from the prematurity itself and to the first stimulus in the NICU²², paying attention to the careful monitoring of high O₂ levels in order to provide adequate support and more gentle ventilation.²³

CONCLUSION

In short, the extremely premature newborn, after birth, must exert vital functions performed by intrauterine placenta and is exposed to an unknown and aggressive environment, becoming more critical during their first 24 hours of life.

Several studies have shown that these premature survival rates have increased over time due to technological advances. However, efforts to improve the quality of life of infants in the post-discharge are still inefficient.

It is possible to reduce many diseases with simple measures such as minimizing handling, providing gentle care, organizing the care with other professionals and respecting the rest time of each newborn.

The lack of research in this specific area sets up a gap in the care that could reduce numerous injuries to the extreme premature. The most essential measures such as a gentle care with minimal handling, respecting the moment of every newborn, should be subject to more scientific studies.

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Received on: 15/03/2015

Required for review: 17/09/2015

Approved on: 31/08/2016

Published on: 25/10/2017

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