

FEEDING OF CHILDREN BORN WITH LOW WEIGHT IN THE FIRST YEAR OF LIFE

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ABSTRACT

Objectives: to identify the prevalence of the types of feedings, up to one year old of life, of newborns with low weight discharged from the Neonatal Intensive Care Unit. **Methods:** a quantitative and cross-sectional research, developed in a Neonatal Intensive Care Unit in the countryside of Rio Grande do Sul, in the period of August to October 2011. The population was composed by 66 newborns with low weight, with data collection through telephone when the child was one year old. It was developed a descriptive analysis of the variables. **Results:** it was found that 77, 3% of newborns with low weight gave discharge from the unit with prescription of mixed breastfeeding; however, when they arrived home, 45, 5% received artificial feeding. On the fourth months old the type of feeding was, in 39, 4%, any type of milk, with pap, mashers, juices and peeled fruits, and the same food was used in 71,2% of newborns at six months old and on the first year of life, 75, 8% were fed with any kind of milk and food equal to the family. **Conclusions:** it was identified the need to develop health education that emphasizes breastfeeding on the first six months of life and complemented after this age.

Keywords: Newborn with low weight. Infant nutrition. Breastfeeding. Neonatal Nursing. Nursing Care.

INTRODUCTION

Adequate nutrition is essential for the growth and development of children, more than that, it is a fundamental human right, as it is the basis of life itself. Thus, the World Health Organization (WHO), the United Nations Fund for Children and the Ministry of Health recommend exclusive breastfeeding (EBF) until six months of age and the introduction of complementary feeding after this age, maintaining use of milk up to two years old or older ⁽¹⁾.

The terminology of complementary food refers to any solid or liquid nutritious foods offered to the child in addition to breast milk, after six months of life. Were also called weaning food, but it is recommended to avoid using that term because it can be understood as food substitutes for breast milk and can cause

total cessation of breastfeeding ⁽²⁾.

Feeding in the first year of life has also been the subject of study in child health. This fact may be related to the importance that food has this phase of life, in relation to their ability to protect or to become a risk factor for the onset of chronic diseases, obesity, allergies, among others ⁽³⁾.

In recent years, there have been frequent scientific meetings, discussions and debates about the infant in the first half of life. Are highlighted mainly the benefits provided by the EBF, particularly in developing countries ⁽⁴⁾.

Thus, besides the important nutritional support breastfeeding (BF) provides for all children, it is considered essential to improve survival and promote the growth of newly born preterm (PN) ⁽⁵⁾, which are newborns (NB) with less than 37 weeks of gestation ⁽⁶⁾.

Among the PN, the feeding of the newborn

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low birth weight (LBW) is a delicate process, because these babies are at risk of developing nutritional deficiencies that can affect your health and postnatal growth ⁽⁷⁾. The LBWIs comprise NBs weighing less than 2.500 grams, sub-classified into low birth weight (1.501 to 2.500 g), very low birth weight (1.001 to 1.500 g) and extremely low birth weight (less than 1.000 g) ⁽⁶⁾.

The increase of the survival of infants with low weight and gestational age progressively lower has caught the attention of health professionals. The survival of these NBs culminates in dealing with problems that may be present, among which stand out the food issues ⁽⁸⁾.

The nutritional adequacy of food offered to children after the sixth month of life is essential for the prevention of anemia, overweight or underweight. In this context, achieving optimal feeding since childhood should be an essential component of the global strategy for food security and nutritional status of a population, either for full-term newborns and for PN and LBWIs ^(1,9).

Highlights the importance of the development of this study LBWIs, presented by nutritional status at birth, configured, often the inability to be fed as soon as they are born, which may influence their growth and development. Thus, knowing the reality of the power of LBWIs certainly will qualify for assistance, so the aim of this study was to identify the prevalence of different types of food in the first year of life LBWIs discharged from a Neonatal Intensive Care Unit (NICU).

MATERIALS AND METHODS

A quantitative research approach, with a descriptive and cross-sectional design, developed in the NICU of a university hospital located in the Midwestern region of the state of Rio Grande do Sul (RS), Brazil. The study population was composed of LBWIs who were hospitalized in the NICU between the periods of 1st August 2009 to 31th August 2010. This court was established for temporal LBWIs that had aged a year of life in the period of data

collection, which occurred between August and October 2011, operationalized in two steps.

The first was developed at the Department of Medical Records and Statistics where the records were accessed in order to characterize the study population. The second stage is developed by means of a telephone interview, when LBW infants had a year old or more, which was conducted by completing a form that allowed us to characterize the type of feeding LBWIs during hospitalization, after discharge from the unit after four and six months and a year to live.

Of total of 310 Hospitalizations occurred in a period of one year of the study, were identified 85 LBWIs, of which were excluded: seven per lack of phone number or the numbers telephone not available once at least three attempts; six per not be the mother the interviewee; three, due to death after hospital discharge; and three, because those responsible by LBWI refused to participate in the research; totaling 66 LBWIs.

To compose the database was double-input independently to ensure the accuracy of the data, *software* Epi Info version 3.5. A descriptive analysis of data was performed by the *software* Statistical Package for Social Science (SPSS, version 17.0).

The project was approved by the Ethics Committee of the Federal University of Santa Maria in August 2011 (CAAE: 0170.0.243.000-11). Was guaranteed anonymity, and consent was given verbally by the interviewees, by reading in full of the Term during telephone contact for data collection.

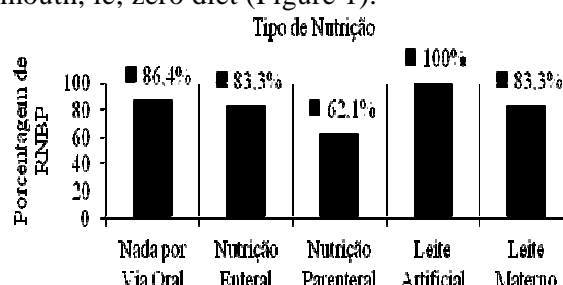
RESULTS AND DISCUSSION

From the 66 LBWIs, it was found that 57, 6% were female and 69, 7% had low birth weight, according to the sub-classification weight ⁽⁶⁾. Gestational age, 90, 9% were PN and the main reason for admission to the NICU was prematurity in 86, 4%, highlighting that they could have more of an indication (Table 1).

Table 1 - Characterization of newborns with low weight. Neonatal Intensive Care Unit / University Hospital of Santa Maria / Rio Grande do Sul from 2009 to 2010. N = 66.

Variable	N	%
Gender		
Female	38	57,6
Male	28	42,4
Birth weight		
Low weight (1501 to 2500g)	46	69,7
Very low weight (1001 to 1500g)	19	28,8
Extreme low weight (<1000g)	1	1,5
Gestational Age		
Pre-term (< 36 weeks and 6 days)	60	90,9
For term (>37 weeks)	5	7,6
Not identified in chart	1	1,5
Reasons for hospitalization		
Prematurity	57	86,4
Respiratory distress syndrome of NB	36	54,5
Low weight	25	37,9
Neonatal Infection	24	36,4
Hyaline membrane disease	22	33,3

The study showed that, for feeding LBWIs during the NICU, we used all avenues of power, according to the evolution of the clinical status and period of hospitalization NBs. 100% of LBWIs prevailed in use of artificial milk, but 86,4% required to remain some time without receiving anything by mouth, ie, zero diet (Figure 1).

**Figure 1** - Type of nutrition of newborns with low weight during the period of hospitalization. Neonatal Intensive Care Unit, University Hospital of Santa Maria / Rio Grande do Sul from 2009 to 2010. N = 66.

Upon admission to the NICU, it is common that they do not receive any kind of food. Your early depends on the clinical outcome, it is recommended that newborns receive breast milk as early as possible, because it meets the needs to immunological and energy-protein needs⁽¹⁰⁾.

Enteral nutrition is the most used method for early milk feeding, maintained until such time that newborns have the ability to

coordinate sucking, swallowing and breathing⁽¹¹⁾.

In the study in a Baby-Friendly Hospital in Ribeirão Preto / São Paulo, the authors state that breast milk has been the choice for the start of milk feeding in various neonatal services. Once all NBs started feeding of milk during the first seven days of life, 98,3% were exclusively on human milk, and 1,7%, human milk associated to milk formula⁽¹¹⁾.

The late onset of BF can compromise the success of breastfeeding and increase the risk of infant death⁽¹²⁾. It is noteworthy that the field of this study does not have a milk bank, an important factor for the supply of the same during the NICU and may interfere negatively in the initiation and maintenance of breastfeeding⁽¹³⁾.

It was found that, at discharge from the NICU, 77,3% were in partial breastfeeding. By the time the kids got home, after discharge, 45,5% in the type of food was prevalent artificial feeding, followed by 37,9% in BF (Table 2).

At four months the type of power was at 39,4%, any kind of milk, with pap, porridge, fruit juices and scraped, and the same power was used in 71,2% of NBs to six months old. Upon completing the first year, 75,8% fed with any type of milk and food equal to the family (Table 2).

Table 2 - Prevalence of types of feeding at discharge up to one year of life, newborns with low weight. Neonatal Intensive Care Unit / University Hospital of Santa Maria / Rio Grande do Sul from 2009 to 2010. N = 66.

Variable	DISCHARGE		AFTER DISCHARGE		4 MONTHS		6 MONTHS		FIRST YEAR	
	N	%	N	%	N	%	N	%	N	%
- Exclusive Breastfeeding	3	4,5	8	12,1	4	6,1	1	1,5	-	-
- Predominant Breastfeeding	-	-	1	1,5	2	3,0	-	-	-	-
- Mixed Breastfeeding	51	77,3	25	37,9	7	10,6	1	1,5	-	-
- Breastfeeding Complemented	-	-	-	-	4	6,1	10	15,2	6	9,1
- Bottle-feeding	12	18,2	30	45,5	23	34,8	-	-	-	-
- Any type of milk, baby food, porridge, juice and scraped fruits	-	-	2	3,0	26	39,4	47	71,2	9	13,6
- Any type of milk, fed with the same meals as the family	-	-	-	-	-	-	7	10,6	50	75,8
- Did not receive any type of milk, fed with the same meals as the family	-	-	-	-	-	-	-	-	1	1,5

At the time of discharge, was identified the predominance of BF, followed by AF. In the study in Ribeirão Preto, also the predominant use of BF as the type of power source indicated, followed by the EBF⁽¹¹⁾.

In the period after discharge, it was observed that the type of power indicated LBWIs not obeyed in the hospital, being more frequent AF, followed by the BF. In studies that have addressed the management of supply LBWIs at home, no evidence of difficulties during breastfeeding and milk supply in the early days at home^(14,15).

These difficulties arise from disorders that women can perform at the initiation and maintenance of breastfeeding as flat nipple, pain and need for achievement milking breast. For the baby it can be related to the difficulty gripping and feeding insufficient. For the family, there are the beliefs related to morphologic Baby (mouth too small) and maternal breast (chest too big for the baby, indicating the idea of suffocation), besides the nutritional properties of breast milk (not sated the baby)⁽¹⁴⁾.

Ignorance of the inherent characteristics of human milk, as distrust of producing little milk and / or be of poor quality for the child, can lead to the early introduction of other foods. Thus, the health professional must be prepared to work directly with the nurse and his family, informing nursing regarding the composition and benefits of breast milk⁽¹⁶⁾, requiring that the network support this woman

for the maintenance of BF is enhanced, making her feel more confident in performing this practice.

For children in EBF, between four and six months of life has been shown that the consumption of solid and semisolid foods the children had significant increase⁽⁹⁾. The early completion can be disadvantageous for child nutrition as it reduces the duration of breastfeeding and hinders the absorption of important nutrients found in breast milk, such as iron and zinc. Furthermore, supplementation with other foods and non-nutritive liquids decreases the total volume of milk ingested, influencing early weaning⁽²⁾.

Study conducted in São Paulo investigated the prevalence of breastfeeding in children under 12 months of age. No study was identified early introduction of other foods in the diet of children aged breastfeeding, especially water and teas⁽¹⁷⁾.

The food supplementation, in addition to offering early food in a period in which only the breast milk supply is sufficient for proper child development⁽¹⁷⁾, it is unnecessary for the nutritional habits of children and can negatively impact the development and healthy growth^(9,18).

A practice proper food for infants corresponds to meet nutritional needs, without exceeding the physiological capacity of the body of children. As per WHO guidelines, the first year of life is recommended complementary

breastfeeding⁽⁹⁾, but was perceived the low rate of this type of power in the study population. In contrast, had become a high rate of discontinuation of BF with offering meals of the same family.

The distortion of the meaning of complementary feeding may invalidate the real function of these foods, which is being foods that complement the BF and not replace that, since breastfeeding after six months, does not meet all the nutritional needs of the child. From six months of life, the child reaches a stage of development and general neurological higher, that helps to receive and accept other foods in addition to breast milk^(9,19).

The introduction of food prepared for the family may occur from the eighth month of life, since I do not have lots of spices or salt. Should be introduced gradually and slowly, as the acceptance of the child, seeking to vary the foods that address the nutrients it needs, and also to contribute to the formation of eating habits, avoiding the food monotony⁽⁹⁾.

CONCLUSION

Showed that feeding practices offered to LBWIs from admission were not consistent with that recommended by WHO. Accordingly, this study serves as a warning for the need to have a greater concern for managers and government to the adequacy of hospital facilities.

Moreover, it is for health professionals to reflect on the actions performed during the hospitalization of LBW infants in the NICU.

These actions should be performed in order to maintain lactation while the RN is not receiving breast milk, helping the mother during milk expression, and also the time that breastfeeding is effective, making the monitoring of both mother and child after discharge hospital, in order to promote, protect and support breastfeeding.

Therefore, it is necessary to carry out health education that emphasizes the EBF in the first six months of life, and after this age, CBF. It should be performed within the primary care during the prenatal and postpartum appointments in childcare, and also in assisting developed within hospitals, either at birth, during hospitalization and at discharge, and fundamental that health professionals know the aspects that hinder or facilitate the establishment and maintenance of breastfeeding.

Recognize the limitations of this study for the development of data collection, because the characterization stage of LBWIs, fills some records had incorrect or missing data, especially the phone number, which prevented the development of the entire interview population. In addition there have been significant losses occasioned by the change of phone number, for not answering the phone or the numbers are not available.

Thus, investigations of this nature are necessary, contributing to the success of breastfeeding and hence to reduce the rates of discontinuation of breastfeeding and complementary feeding before the recommended period.

ALIMENTAÇÃO DE CRIANÇAS QUE NASCERAM COM BAIXO PESO NO PRIMEIRO ANO DE VIDA

RESUMO

Objetivo: identificar a prevalência dos tipos de alimentação, até um ano de vida, dos recém-nascidos de baixo peso egressos da Unidade de Terapia Intensiva Neonatal. Métodos: pesquisa quantitativa e transversal, desenvolvida em uma Unidade de Terapia Intensiva Neonatal do interior do Rio Grande do Sul, no período de agosto a outubro de 2011. A população foi composta de 66 recém-nascidos de baixo peso, tendo a coleta de dados sido feita via telefone quando a criança tinha um ano de idade. Realizou-se análise descritiva das variáveis. Resultados: constatou-se que 77,3% dos recém-nascidos de baixo peso deram alta da unidade com prescrição de aleitamento materno misto, porém, ao chegar em casa, 45,5% receberam aleitamento artificial. Aos quatro meses o tipo de alimentação foi, em 39,4%, qualquer tipo de leite, com papinhas, mingau, sucos e frutas raspadas, e a mesma alimentação foi utilizada em 71,2% dos recém-nascidos aos seis meses de vida. No primeiro ano, 75,8% alimentavam-se com qualquer tipo de leite e refeições iguais às da família. Conclusões: identificou-se a necessidade da realização de educação em saúde que enfatize o aleitamento materno exclusivo nos primeiros seis meses de vida e complementado após essa idade.

Palavras-chave: Recém-nascido de baixo peso. Nutrição do lactente. Aleitamento materno. Enfermagem neonatal. Cuidados de enfermagem.

ALIMENTACIÓN DE NIÑOS QUE NACIERON CON BAJO PESO EN EL PRIMER AÑO DE VIDA

RESUMEN

Objetivo: Identificar la prevalencia de los tipos de alimentación, hasta un año de vida, de los recién nacidos de bajo peso egresados de la Unidad de Cuidados Intensivos Neonatal. **Métodos:** Investigación cuantitativa y transversal, desarrollada en la Unidad de Cuidados Intensivos Neonatal del interior del Rio Grande do Sul, en el período de agosto a octubre de 2011. La población fue compuesta por 66 recién nacidos de bajo peso, teniendo la recolección de datos hecha a través del teléfono cuando el niño tenía un año de edad. Se realizó el análisis descriptivo de las variables. **Resultados:** Se constató que 77,3% de los recién nacidos de bajo peso tuvieron el alta de la unidad con prescripción de la lactancia materna mixta, sin embargo, al llegar a casa, el 45,5% recibió lactancia artificial. A los cuatro meses el tipo de alimentación fue, el 39,4%, cualquier tipo de leche, con comidas para bebés, papilla, jugos y frutas raspadas, y la misma alimentación fue utilizada el 71,2% de los recién nacidos a los seis meses de vida. Durante el primer año, el 75,8% se alimentaba con cualquier tipo de leche y comidas iguales a las de la familia. **Conclusiones:** Se identificó la necesidad de la realización de educación en salud que enfatice la lactancia materna exclusiva en los primeros seis meses de vida y complementado después de esta edad.

Palabras clave: Recién nacido de bajo peso. Nutrición del lactante. Lactancia materna. Enfermería Neonatal. Atención de enfermería.

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Data de recebimento: 21/01/2013

Data de aprovação: 27/08/2013