v. 3, n. 39, 2023

International Journal of Health Science

PROFILE OF HOSPITALIZATION, PHYSIOTHERAPY CARE AND THE CLINICAL OUTCOME OF PREMATURE NEWBORN INFANTS HOSPITALIZED IN AN INTERMEDIATE CARE UNIT

Juliana Loprete Cury
PhD in Health and Development in the Midwest Region. Department of Physiotherapy of ``Centro Universitário da Grande Dourados`` – UNIGRAN. Rua Balbina de Matos, 2121. Jardim Universitário, Dourados, MS.

Ana Carolini Ferreira de Castro
Physical Therapist Graduate in Maternal and Child Health by the Multidisciplinary Residency Program in Mother and Child Health. Universitary hospital. ``Universidade Federal da Grande Dourados``. Dourados, MS, Brazil.

Patrick Jean Sales Barbosa
Physical Therapist Graduate in Maternal and Child Health by the Multidisciplinary Residency Program in Mother and Child Health. Universitary hospital. ``Universidade Federal da Grande Dourados``. Dourados, MS, Brazil.

Sarah de Souza Araújo
Postgraduate Nutritionist in Maternal and Child Health by the Multidisciplinary Residency Program in Maternal and Child Health in ``Universidade Federal da Grande Dourados``. Dourados, MS, Brazil.

Laederson Souza Machado
Physiotherapist specialist in Intensive Physiotherapy in Neonatology and Pediatrics. Preceptor in the Maternal and Child Residency program. Universitary hospital. ``Universidade Federal of Grande Dourados``. Rua Ivo Alves da Rocha, 558. Altos do Indaiá, Dourados, MS, Brazil.

Abstract: Objectives: To characterize the hospitalization profile of preterm newborns (PTNB), their clinical outcome and physiotherapy performance. **Methods:** Retrospective cross-sectional study, with analysis of medical records of PTNB (≤ 37 weeks) who remained hospitalized in the NICU during the year 2018. Results presented in absolute (relative) n (%) and mean ± standard deviation. **Results:** 195 PTNB medical records were analyzed. Mean maternal age was 27 years and 48.2% of mothers had prenatal care. The most frequent previous disease was syphilis (32.35%), and the most frequent gestational complications were: ruptured bag (29.23%) and specific hypertensive disease of pregnancy (7.69%). The most common intercurrence in premature infants was jaundice (10.62%). The major cause of hospitalization was respiratory distress syndrome (81.53%). The mean duration of oxygen therapy was 6.81 ± 12.65. Only 9.23% of preterm infants were assisted with motor physiotherapy interventions or stimulation. **Conclusion:** The most common previous maternal disease was syphilis, while the gestational intercurrences were: ruptured bag and DHEG, with low adherence to prenatal care. The characteristics of PTNBs were low gestational age, low birth weight, respiratory distress syndrome, jaundice, and use of oxygen therapy. The most prevalent comorbidities were cardiac. Physiotherapy assistance was focused on respiratory interventions.
Keywords: Premature Newborn, Neonatal ICU, Physiotherapy, Treatment Result.

INTRODUCTION

Prematurity has been the main cause of hospitalizations and deaths of newborns, in addition to being related to respiratory diseases, which are more frequent in premature infants due to the immaturity of the respiratory system. [1]

In order to reduce the levels of neonatal

mortality, specific measures are necessary, such as the identification of high-risk pregnancies, the early treatment of gestational complications, the improvement of the quality of delivery care, prevention of factors related to low birth weight, and adequate and specialized assistance by a multidisciplinary team to preterm newborns (PTNB). [2]

Currently, the technology used to maintain the survival of PTNBs has reached a high level of complexity, making it possible to save lives that were previously considered unfeasible. [2] However, there is little research on the status of preterm infants at discharge and their prognosis.

The neonatal mortality rate refers to the deaths of newborns (NBs) from 0 to 27 days of life, and corresponds to an important epidemiological indicator as it reflects not only on the assistance provided to mothers and babies, but also on socioeconomic conditions of a particular region. [3]

In 2011, the neonatal mortality rate in Brazil was 10.6 per thousand live births. Comparing the regions, the South region had the lowest rates, 7.8 cases; in the Midwest region, the index was 10.9. In the state of Mato Grosso do Sul, the rate was 9.4 cases per thousand live births (BRASIL, 2018). [4]

It is a challenge for physiotherapy professionals to contribute not only to maintaining the survival of PTNBs, but also to stimulate their development and skills. [5] In this sense, physiotherapeutic interventions in health care and newborn development must be analyzed and focused in a global way. Thus, goals and behaviors related to motricity and respiratory mechanics are necessary (SILVA et al., 2010). [6]

There is a scarcity of studies that address the particularities of the field of action and approaches of the physiotherapist in Neonatal Intermediate Care Units (NICU), and studies are more focused on Neonatal Intensive Care Units (NICU). Thus, it is important to know the needs of each PTNB, aiming to contribute to the development of interventions and individualized physiotherapeutic care.

Thus, the objective of the present study is to characterize the hospitalization profile of the PTNB, its clinical outcome and the profile of the physiotherapeutic assistance received, in a NICU of a reference service.

METHODOLOGY

This is an epidemiological, retrospective, cross-sectional descriptive study, through data collection from medical records of premature newborns admitted to the Neonatal Intermediate Care Unit (NICU) of the University Hospital of ``Universidade Federal da Grande Dourados`` (HU-UFGD).

A total of 221 records of PTNBs were found, who remained hospitalized at the NICU in 2018. 23 records of indigenous PTNBs and three records that did not contain sufficient data were excluded. Thus, 195 records remained to compose the sample.

Data collection started after approval of the project by the HU-UFGD (under protocol xxxxxx) and by the Ethics and Human Research Committee of ``Centro Universitário`` in Grande Dourados (UNIGRAN), approval protocol (xxxxxxxx)

The data collection protocol for the present study was divided into four parts: the PTNB profile, the mothers' profile, the clinical outcome and the physiotherapeutic assistance profile.

To characterize the profile of PTNBs, the following variables were used: gestational age; sex; type of delivery; birth weight; Apgar score (first and fifth minutes); diagnosis; clinical complications; presence of associated pathologies; place of origin; use and dose of surfactant; transfontanellar ultrasound (TFUS) result; diet; use and length of stay on mechanical ventilation; use and length of stay

in oxygen therapy; and length of stay.

For maternal history, the following data were collected: maternal age; completion of prenatal care and the number of consultations; gestational complications; use of antenatal corticosteroids and/or antibiotics in the prepartum period; number of pregnancies; and prior illness.

To characterize the clinical outcome, the following criteria were adopted: discharge with improvement; discharge with comorbidity; transfer to another hospital; and death.

As a profile of physical therapy assistance, the following variables were used: stretching; passive mobilization; therapeutic positioning; sensory stimulation; bronchial hygiene techniques; lung re-expansion techniques; and other techniques.

For data analysis, descriptive statistics were used according to the classification of qualitative variables (absolute and relative frequency) or quantitative variables (mean and standard deviation). The association between variables was carried out using specific tests (chi-square or another according to the presentation of the collected data). IT WAS NOT PLACED, BETTER TAKE IT OFF

RESULTS AND DISCUSSION

195 medical records of PTNB who were hospitalized in a NICU of a hospital in the interior of the state of Mato Grosso do Sul, reference in the Maternal-Infant line, were analyzed.

The main maternal characteristics of PTNB admitted to the NICU are described in Table 1. Regarding maternal age, 69.74% (n=136) were older than 20 years, with a mean age of 27 years (±7.24). However, 10.25% (n=20) of the medical records did not contain this data. Only 48.2% (n=94) of the mothers had prenatal care, with an average number of consultations of 7.34 ± 3.52. However, it was not registered in 48.2% of the medical records regarding prenatal care, and in 83.07%, the number of consultations. Among the most common previous maternal diseases, cases of Syphilis are in greater numbers, 32.35% (n=11).

In addition to Syphilis, other maternal diseases were also found, such as: Systemic Arterial Hypertension 26.47% (n=9), Diabetes Mellitus 23.52% (n=8) and Thrombophilia 8.82% (n=3). Of the previous diseases that presented only 2.94% (n=1) of the cases, they were Cytomegalovirus, Previous Detachment of Placenta, Chronic Kidney Disease, Hypothyroidism, HIV and Urinary Tract Infection.

Table 2 shows the complications that occurred during the gestational period. There was a prevalence of 79.29% of intercurrences, with a greater number of cases of ruptured membranes (29.23%) and specific hypertensive diseases of pregnancy (7.69%).

Table 3 shows the intercurrences with the PTNB. It shows that most PTNBs had neonatal jaundice (79.48%); 23.07% required manual positive pressure ventilation (PPV); and 18.46% needed packed red blood cells (Table 3).

Of the evaluated PTNBs, there was a higher prevalence of diagnosis of Respiratory Distress Syndrome (RDS) 81.53%, followed by twins 18.97% and sepsis 16.41%, as shown in Table 4.

PTNB had a mean gestational age of 33.01 ± 2.26 weeks; mean birth weight of 1,889.67 ± 562.62 g; and mean Apgar score in the first minute of life of 8.39 ± 1.97 and in the second minute was 8.39 ± 1.39. The mean length of stay was 23.1 ± 28.65 days.

It is observed in Table 5 that the majority of PTNB (85.12%) required oxygen therapy. The average time of oxygen therapy days was 6.81 ± 12.65 days . Of those who used surfactant, in 61.13% the dose was on average 7.98 ± 3.62 ml.

Of the total number of records analyzed, 141 neonates (72.3%) were evaluated by physical therapy. Of these, 9.23% received respiratory and motor physical therapy; 9.23% received motor physical therapy; 53.84% received respiratory physiotherapy care; and 18.46% were evaluated and were not attended.

In the present study, 63 (32.3%) PTNB were discharged with improvement, not identifying any comorbidity until the moment of the same. The most common comorbidities at discharge were cardiac. Being more frequent the patent foramen ovale 88 (45.12%), followed by Persistence of the Arterial Canal 20 (10.25%), Interatrial Communication (ASD) 58 (29.74%), ASD Ostium secudium 16 (8.2 %), Interventricular Communication 10 (5.12%), Arterial Hypertension 1 (0.51%) and left ventricular hypertrophy 1 (0.51%).

The pulmonary ones were Pulmonary Hypertension with 6 (3.07%) and Pulmonary Bronchodysplasia with 3 (1.53%) PTNB. One premature baby (0.51%) was discharged with home oxygen therapy. Other comorbidities found were Retinopathy of Prematurity in 6 (3.07%) PTNB, and Epilepsy in 1 (0.51%). The number of deaths was 4 (2.05%) and 1 (0.51%) PTNB was transferred to another hospital.

DISCUSSION

Maternal age is one of the factors that can be related to prematurity. In this study, it is in agreement with other studies. [2,7] Most performed a number of prenatal consultations considered. However, it is worth mentioning that there is a high prevalence of the absence of these data in the medical records, which may have contributed to the prevalence of Syphilis found in this study.

It is known that prenatal consultations are extremely important to monitor intrauterine development and maternal health, since the presence of diseases can be detected. In a nationwide study, the prevalence of seropositivity for syphilis was 0.89%, corresponding to approximately 26,700 pregnant women/year. In that same study, it was observed that the risk of positivity for syphilis decreased as the number of prenatal consultations increased. Parturients who had one to five consultations had a 61.5% increase in the occurrence of the disease, when compared to those who had at least six consultations. [8]

The high prevalence of complications that occurred during the gestational period may be associated with prematurity. In the present study, it can be inferred that the greater number of cases of prematurity may be related to ruptured sacs. A study also found a higher number of cases of ruptured pouch (14.5%). [1] Rarely is the cause of a ruptured pouch known. [9]

Another intercurrence that may have influenced prematurity are the Specific Hypertensive Diseases of Pregnancy (7.69%). DHEG can be determined as a clinical and laboratory manifestation resulting from increased blood pressure levels in a pregnant woman, which occurs from the 20th week onwards, disappearing within six weeks after delivery. [10]

This study showed a high prevalence of neonatal jaundice as a complication when compared to the literature (10.62%). [3] Most often, jaundice reflects a neonatal adaptation to bilirubin metabolism and is termed "physiological". At other times, it results from a pathological process, reaching high concentrations and being harmful to the brain. Significant hyperbilirubinemia present in the first week of life is a worrying problem and is often associated with inadequate milk supply, high weight loss and dehydration. [11]

The literature shows, as the main causes of hospitalizations in the NICU, affections such as: transient tachypnea of the newborn, neonatal infection, congenital syphilis, prematurity, septicemia, neonatal jaundice, pneumonia

and neonatal anoxia. [3] In the NICU, the main conditions are: prematurity, respiratory complications, cardiac complications and low birth weight. [1] It is worth mentioning that the PTNB discharged from the NICU of the HU-UFGD go for follow-up at the NICU before hospital discharge.

Of the evaluated PTNBs, there was a higher prevalence of diagnosis of Respiratory Distress Syndrome (RDS) 81.53%, compared to the literature (41.3%). [1] Respiratory dysfunctions are very common in PTNB, which may increase the number of cases requiring the use of oxygen therapy and the number of days depending on the dysfunction, which may lead to prolonged hospital stays and a greater risk of infections. Some of the strategies to promote lung maturation are: the use of corticosteroids in the antenatal period and the use of surfactant to stabilize the surface tension of the alveoli, reducing the risk of death by increasing pulmonary functional residual capacity.

The endogenous surfactant is synthesized around the twentieth week of gestation, reaching its peak of production and action around 35 weeks (SARMENTO, 2011), inferring that according to the average of the present study (33.01 ± 2.26 weeks) pregnancies have been interrupted before this process. The association between prematurity and low weight is an important corroborating factor with the high risk of infant mortality. [12]

Children considered underweight are at greater risk for morbidity and mortality. With regard to weight, low birth weight newborns are those with a birth weight of less than 2,500 g; very low weight those with birth weight less than 1,500 g; and extreme low weight those with birth weight less than 1,000 g (BRASIL, 2015). [13]

Birth weight and gestational age are considered risk factors that determine the evolution of the newborn. [7] PTNBs with low birth weight are exposed to risk factors such as changes in nutritional supply during hospitalization and after discharge, which limits their growth and development, longer hospital stays, chronic diseases, morbidities such as bronchopulmonary dysplasia and delays in neuropsychomotor development (RUGOLO, 2007). [14]

The Apgar score is able to assess the responsiveness and physiological conditions, collaborating in the identification of special care. A value from 0 to 3 is considered severe, from 4 to 7 moderate, and from 8 to 10 normal. [7] The mean Apgar score in the first minute of life was 8.39 ± 1.97 and in the second minute it was 8.39 ± 1.39. The mean Apgar score in the first minute corroborates a study, in which the mean value was considered moderate. [7]

The mean length of stay was 23.1 ± 28.65 days. PTNBs become more prone to infectious risks in prolonged hospitalizations, in addition to increasing hospital costs and contributing to overcrowding in sectors. A study reports an average length of stay of 36 days [7] , demonstrating favorable data for the hospital in the present study.

The impact of the NICU environment raises concerns about the neuropsychomotor development of the newborn, as stress, pain, inadequate sensory stimulation and invasive procedures are routine during this period of hospitalization. Other factors that can compromise the neuropsychomotor development of neonates are perinatal asphyxia, apnea, infections, hyperbilirubinemia, prolonged use of mechanical ventilation, intracranial hemorrhages, among others. [15]

The physiotherapist is part of the multidisciplinary team that provides assistance in the NICU. Physiotherapy care must encompass global care and interventions that meet the respiratory and motor needs of newborns, thus contributing to the development of the baby. [6]

PTNBs can present several complications and/or pathologies, and the physiotherapeutic approach is part of their treatment. This aims to prevent and minimize respiratory and motor complications resulting from prematurity and length of stay. [16]

The hospitalization process accentuates the postural changes and muscle tone of PTNBs, due to the prolonged time in the incubators, exposure to devices and vascular accesses, making the baby's movements difficult, which leads to a marked extension of the neck, trunk and shoulders. limbs, spending most of the time in the supine position, resulting in muscle imbalance. Therefore, motor physiotherapy is among the procedures used with the concern to reduce the delay in the neuropsychomotor development of neonates. [15]

It is up to the physiotherapist to promote the motor, cognitive, intellectual and social stimulation of the PTNB, seeking appropriate positions and tactile stimuli. Alternating decubitus positions (ventral, dorsal, right lateral and left lateral) help maintain postural and vestibular controls, adapt an organized motor response and stabilize PTNBs. [5]

Respiratory physiotherapy uses specific techniques, bringing the benefit of improving the clinical condition, observed through pulmonary auscultation, vital signs and complementary exams. The goals of this approach include decreasing the work of breathing, maintaining a patent airway, and improving pulmonary ventilation and gas exchange. The techniques that use bronchial hygiene maneuvers are intended to optimize the ciliary mucus clearance mechanism, preventing secretion accumulation. [16]

Neonatal Units are divided according to care needs. In NICUs, a physiotherapist is required for every fifteen beds or fraction of each shift (BRASIL, 2012). [18] The HU-UFGD is the reference hospital in the line of maternal and child care in the city of Dourados and region, therefore, it experiences problems of overcrowding, requiring the opening of new beds, overloading professionals, which justifies the lack of evaluation of neonates (27.7%) and attendances (18.46%) by physiotherapy .

The increase in the survival of PTNB with lower gestational age has generated growing concern regarding the prognosis of their growth and development (Rugolo, 2007) [14] . In the present study, 32.3% (n=63) PTNB were discharged with improvement, not identifying any comorbidity until the moment of the same.

In the present study, the most common comorbidities at discharge were cardiac. The most frequent patent foramen ovale 45.12% (n=88), followed by patent ductus arteriosus 10.25% (n=20), atrial septal defect (ASD) 29.74% (n=58), ASD Ostium secudium 8.2% (n=16) , ventricular septal defect 5.12% (n=10), Arterial Hypertension 0.51% (n=1) and left ventricular hypertrophy 0.51% (n=1).

The incidence of moderate to severe structural congenital heart disease is 6 to 8 per 1,000 live births. This incidence has remained relatively constant over the years and in different regions of the world. The higher recent incidence rates seem to result from the inclusion of more trivial forms of congenital heart disease, such as minute ventricular septal defects that are more frequently detected by high-sensitivity echocardiography (CLOHERTY et al, 2010) . [17]

Pulmonary disorders in PTNBs were Pulmonary Hypertension with 3.07% (n=6) and Pulmonary Bronchodysplasia with 1.53% (n=3). One premature baby (0.51%) was discharged with home oxygen therapy.

Other comorbidities found in PTNBs were Retinopathy of Prematurity in 3.07% (n=6), and Epilepsy in 0.51% (n=1). The number of PTNB deaths was 2.05% (n=4) and 0.51% (n=1) were transferred to another hospital.

CONCLUSION

The previous maternal diseases with the highest number of cases were arterial hypertension and syphilis. The most common gestational intercurrences were ruptured sacs, DHEG and fetal distress. A reduced number of women used antenatal corticosteroids, which is important for the maturation of the lungs of PTNBs, in addition to a considerable number of mothers who did not undergo prenatal care.

The characteristics of the PTNB, the causes of hospitalization and the most prevalent diagnoses were low gestational age; low weight at birth; presence of RDS, neonatal jaundice , twins, neonatal sepsis; and use of oxygen therapy. The most frequent clinical intercurrences were jaundice and the need for manual ventilation with positive pressure and transfusion of packed red blood cells.

Physiotherapy assistance had as its main objective respiratory interventions, with a low number of consultations related to neuropsychomotor development, such as early stimulation.

The most prevalent clinical outcome was hospital discharge with complications or cardiac sequelae followed by respiratory ones.

REFERENCES

1. Damian A, Waterkemper R, Paludo, C. A. Perfil de neonatos internados em unidade de tratamento intensivo neonatal: estudo transversal. Arqu ciênc saúde. 2016; 23 (2): 100-105.

2. Benites PT, Nunes CB. Conhecendo o perfil do recém-nascido em uma unidade de terapia intensiva. Rev Ensaios e ci. 2006; 10 (3): 33-40.

3. Vasconcelos EM, Ketly PA, Martino MF. Perfil de internação de recém-nascidos de alto risco em uma unidade de cuidado intermediário neonatal. Rev enferm UFPE. 2013; 7 (11): 6422-9.

4. Brasil. Ministério da Saúde. DATASUS. [acesso em 01 set 2018]. Disponível em: <http://tabnet.datasus.gov.br/cgi/idb2012/c0104b.htm.> .

5. Conde MF. O efeito de um programa de fisioterapia na estabilização do prematuro [dissertação]. Lisboa: Escola Superior de Tecnologia da Saúde de Lisboa do Instituto Politécnico de Lisboa; 2012.

6. Silva APP, Formiga, CKMR. Perfil e características do trabalho dos fisioterapeutas atuantes em unidade de terapia intensiva neonatal na cidade de Goiânia – GO. Revista Movimenta. 2010; 3 (2): 62-68.

7. Oliveira CS, Casagrande GA, Grecco LC, Golin MO. Perfil de recém-nascidos pré-termo internados na unidade de terapia intensiva de hospital de alta complexidade. ABCS Health Sci. 2015; 40 (1): 28-32.

8. Sentinela et al. (2010) INCLUIR OS DADOS DESSE AUTOR

9. Scandiuzzi MM, Pinheiro TC, Rodrigues AAN, Antonio F, Alcadipani MC. Resultados maternos e perinatais na ruptura prematura de membranas. Rev Fac Ciênc Méd. 2014; 16 (4), 178 -181.

10. Bringmann, N.V. Hipertensão na Gravidez; 2004.

11. Sociedade Brasileira de Pediatria Departamento de Neonatologia. Icterícia no recém-nascido com idade gestacional > 35 semanas. SBP; 2012.

12. Sarmento GJV, Carvalho FAFP. Fisioterapia respiratória em pediatria e neonatologia. 2.ed. Barueri, SP: Manole; 2011.

13. Brasil. Secretaria de Estado da Saúde. Manual de neonatologia, agosto de 2015. [acesso em 30 ago 2018]. Disponível em: https://edisciplinas.usp.br/pluginfile.php /3905 402/mod_resource/content/1/manual_de_neonatologia.pdf.

14. Rugolo LMSS, Bentilin MR, Rugolo Junior A, Dalben I, Trindade CEP. Crescimento de prematuros de extremo baixo peso nos primeiros dois anos de vida. Rev Paul Pediatria. 2007; 25(2): 142-9

15. Theis RCSR, Gerzson LR, Almeida CS. A atuação do profissional fisioterapeuta em unidades de terapia intensiva neonatal. Cinergis. 2016; 17 (2): 168-176.

16. Carneiro TLP, Molina PD, Santos KSS, Teixeira CS, Leandro JD. Avaliação da dor em neonatos prematuros internados na unidade de terapia intensiva neonatal após fisioterapia respiratória. J Health Sci Inst. 2016; 34 (4): 219-23.

17. Cloherty JP, Eichenwald EC, STARK AR. Manual de Neonatologia. [traduzido por Vasconcelos MM]. Rio de Janeiro: Guanabara Koogan; 2010.

18. Brasil. Ministério da Saúde. Gabinete do Ministro. Portaria Nº 930, de 10 de maio de 2012. Define as diretrizes e objetivos para a organização da atenção integral e humanizada ao recém-nascido grave ou potencialmente grave e os critérios de classificação e habilitação de leitos de Unidade Neonatal no âmbito do Sistema Único de Saúde (SUS). Brasília, 2012. [acesso em 31 ago 2018]. Disponível em: <http://bvsms.saude.gov.br/bvs/saudelegis/gm/2012/prt0930_10_05_2012.html.>

CUNHA A. R. C.; MERCHAN-HAMANN E. Sífilis em parturientes no Brasil: prevalência e fatores associados, 2010 a 2011. Rev Panam Salud Publica. 2015;38(6):479–86. NÃO ESTÁ CITADO EM NENHUM LUGAR DO TEXTO

Maternal characteristics of PTNB admitted to the NICU.

Variables	No	%
Pregnancies		
1 to 3 pregnancies	124	63.58
4 to 6 pregnancies	22	11.28
7 to 9 pregnancies	9	4.61
births		
1 to 3 births	134	86.45
4 to 6 births	17	10.96
7 to 9 births	4	2.58
abortions		
0 abortion	115	74.19
1 abortion	32	20.64
2 to 3 miscarriages	8	5.15
Not included	40	20.51
Prenatal		
Yes	94	48.2
No	7	3.58
Not included	94	48.2
Number of Consultations		
Greater/equal to 6	19	9.74
Less than 6	14	7.17
Not included	162	83.07
Use of Antenna Medications		

Used medications	66	33.84
Did not use medication	130	66.15
Corticosteroids were used	65	98.48
used antibiotics	1	1.51
corticosteroid + antibiotic	5	7.57
Presence of previous maternal diseases		
Yes	34	17.43
No	161	82.56

Table 1

Intercurrences that occurred during the gestational period of mothers of PTNB admitted to the NICU.

Variables	No	%
gestational intercurrences		
Yes	139	79.29
No	56	28.71
Types of gestational complications		
Bolsa Rota	57	29.23
oligohydramnios	12	6.15
anhydramnium	1	0.51
polyhydramnios	1	0.51
2 round cord	2	1.02
cord circular	1	0.51
Urinary tract infection	10	5.12
chorioamnionitis	8	4.1
Pre-eclampsia	10	5.12
Eclampsia	1	0.51
Pregnancy-specific hypertensive disease (DHEG)	15	7.69
HELLP syndrome	3	1.53
Pre-eclampsia + DHEG	2	1.02
Systemic arterial hypertension	1	0.51
Prior placental abruption	10	5.12
Premature rupture of membranes	2	1.02
fetal distress	12	6.15
premature labor	11	5.64
thrombophilia	1	0.51
Use of Cytotec	2	1.02
Septic shock	1	0.51
Acute lung edema	1	0.51
traumatic brain injury	1	0.51
Toxoplasmosis in pregnancy	1	0.51
Hand and foot cormic presentation	1	0.51
breech presentation	3	1.53
Pelvic presentation with foot prolapse	1	0.51
podalic presentation	2	1.02
pelvic delivery	2	1.02

fetal bradycardia	5	2.56
Intrauterine growth restriction	6	3.07
zero cord diastole	1	0.51
fetal centering	5	2.56
Convulsive Crisis	1	0.51
short cervix	2	1.02
I was unaware of the pregnancy	3	1.53
Placenta previa	2	1.02
placental hematoma	1	0.51
home birth	1	0.51
Childbirth on the way to the hospital	1	0.51
Gestational diabetes	1	0.51
fetal dystocia	1	0.51
Uterine cervix anomaly	1	0.51

Table 2

Complications reported in the medical records at the time of delivery and/or during the hospitalization of newborns admitted to the NICU.

Variables	**No**	**%**
There were no complications	36	18.46
neonatal sepsis	7	3.58
Jaundice	155	79.48
Manual ventilation with positive pressure	45	23.07
red blood cell concentrate	36	18.46
frenectomy	8	4.1
convulsive crisis	3	1.53
Apnea	7	3.58
Bronchopulmonary Dysplasia	5	2.56
neonatal anoxia	3	1.53
Hypoalbulinemia	10	5.12
anasarca	1	0.51
bruise mask	1	0.51
Urinary tract infection	1	0.51
hypotonia at birth	1	0.51
Hypoalbulinemia	10	5.12
twin-twin transfusion	1	0.51
cardiopulmonary arrest	7	3.58
Cyanosis	4	2.05
Left upper limb ischemia	1	0.51
Pneumonia	3	1.53
cord circular	1	0.51
pneumothorax	2	1.02
fetal distress	2	1.02
thoracotrauma	2	1.02
platelet concentrate	4	2.05
plasma transfusion	2	1.02

secondary hepatitis	2	1.02
Pulmonary hypertension	1	0.51
hemorrhagic shock	1	0.51
Hypovolemic shock	1	0.51
hyperglycemia	1	0.51
endocartitis	1	0.51
supraglottic obstruction	1	0.51
scrotal hernia	1	0.51
hypoglycemia	2	1.02
knee abscess	1	0.51
Duodenal ulcer	1	0.51

Table 3

Causes of hospitalizations found in the medical records of premature infants during their stay at the NICU.

Diagnostics	**No**	**%**
Prematurity	195	100
Respiratory Distress Syndrome	159	81.53
meconium aspiration syndrome	6	3.07
twins	37	18.97
twinning with stillbirth	1	0.51
sepsis	32	16.41
Congenital syphilis	14	7.17
neurosyphilis	1	0.51
Congenic cardiopatics	7	3.58
anoxia	10	5.12
Bronchopulmonary Dysplasia	3	1.53
necrotizing enterocolitis	2	1.02
Down's syndrome	2	1.02
west syndrome	1	0.51
neonatal cholestasis	2	1.02
cholestatic syndrome	2	1.02
Malformation in left upper limb	1	0.51
thumb agenesis	1	0.51
acrocyanosis	1	0.51
twin-twin transfusion	1	0.51
pre-auricular appendix	1	0.51
esophageal atresia	1	0.51
Convulsive Crisis	1	0.51
Pneumonia	1	0.51
HIV	1	0.51
scalp cut	1	0.51
Dehydration	1	0.51
renal ectasia	1	0.51
syndromic face	1	0.51
clavicle fracture	1	0.51

Omphalocele	1	0.51
gastroschisis	2	1.02
cardiopulmonary arrest	3	1.53
Pulmonary hypertension	3	1.53
coagulation disorders	1	0.51
hypernatremia	1	0.51
Social hospitalization	2	1.25
Urinary tract infection	1	0.51
congenital clubfoot	1	0.51
pneumothorax	1	0.51
ABO-hemolysis incompatibility	1	0.51

Table 4

Profile of Premature Newborns.

Variables	**No**	**%**
type of delivery		
cesarean section	126	64.62
Normal	68	34.87
Not included	1	0.51
Sex		
Feminine	92	47.17
Masculine	103	52.82
Used antenatal corticosteroid		
Yes	118	60.51
No	75	38.46
Not included	2	1.025
Origin		
obstetric center	151	77.43
other hospital	39	20
rooming-in	4	2.051
Not included	1	0.51
diet on high		
Exclusive breastfeeding	30	15.38
Formula	17	8.71
Breastfeeding and complement	148	75.89
high diet route		
orally	193	98.97
gastrostomy	1	0.51
nasogastric tube	1	0.51
Used Invasive Mechanical Ventilation		
Yes	48	24.61
No	147	75.38
Used Non-Invasive Mechanical Ventilation		
Yes	21	10.76
No	174	89.23

Used oxygen therapy		
Yes	166	85.12
No	29	14.87

Table 5