INTERNATIONAL SEVEN JOURNAL
OF HEALTH RESEARCH
ISSN: 2764-9415

Clinical aspects of newborns admitted to a neonatal intensive care unit

Aspectos clínicos dos recém-nascidos internados em unidade de terapia intensiva neonatal

DOI: 10.56238/isevjhv3n1-009
Receipt of originals: 12/29/2023
Publication Acceptance: 01/18/2024

Danieli Damasceno Soares[1], Aluana Moraes[2].

ABSTRACT

Objective: To identify the clinical profile of newborns admitted to Neonatal Intensive Care Units. Methodology: This is an observational study of the ecological type, with a quantitative approach, carried out with data from newborns hospitalized in Neonatal Care Units of hospitals in the city of Cascavel, western region of Paraná, Brazil. The following variables were studied: sex, color/race, type of delivery, gestational age, number of prenatal visits, mother's age, mother's level of education, birth weight, congenital malformation, type of congenital malformation, apgar. Results: Based on the results of this study, we can identify that most of the newborns were male, born by cesarean section, most of them considered adequate for gestational age (AGA), being less than 2,500 grams, with apgar score at the 1st and 5th minutes considered between normal and moderate. Discussion: Knowing the main hospitalization diagnoses and the main reasons for premature births, it is suggested to carry out relationship studies to compare the variables studied, enhancing the understanding of the findings, as well as studies of interventions carried out after the identification of results similar to those of this study, in order to identify whether the profile of those hospitalized in the Neonatal ICU is known. It is possible to intervene to prevent and avoid damage and sequelae. Conclusion: However, this research allowed us to know the studied population under the aspects of its growth and practices performed in the unit, bringing contributions to the service, enabling changes in the management of these babies and all those who contribute to their development.

Keywords: Neonatal nursing, Profile, Neonatal ICU, Inpatient care.

1 INTRODUCTION

The Neonatal Intensive Care Unit (NICU) is characterized as an area of care for newborns from 0 to 28 days of life, critically ill, vulnerable, who need special and continuous nursing care, which requires great scientific knowledge, technical skill and the ability to perform particularly careful evaluations of these patients. (ALFARO LEFEVRE; 2005)

The nurse is the one who holds the knowledge and controls the work process, has the responsibility with the members of his team, because they are the ones who perform the tasks. In

[1] Student of the 5th year of the Nursing course at UNIPAR campus Cascavel
[2] Master Professor and Advisor of the Nursing Course at UNIPAR, Cascavel campus

this environment, it is necessary to have professionals with a high level of scientific knowledge, technical skills and the ability to carry out a careful evaluation of the patient and intervene in the particularities of each one, as there is a need for direct and humanized care (GAÍVA and SCOCHI 2004).

The hospitalization of newborns generates a need for the family to be part of this process. This happens because separation causes anguish and anxiety, generated by factors such as: uncertainty of survival; risks of sequelae; post-hospitalization relationship with the NB, factors that can cause stress and insecurity, hindering the interaction of parents with their children (MENDES, 2003).

It is necessary for nurses to understand and respect this moment, as well as to provide care strategies for the newborn and the family. In the care plan, it is necessary to foresee actions that favor the presence of the mother with the child, which is legitimized by the Statute of the Child and Adolescent. Care and comfort are linked to the expectations and needs of those who are cared for, therefore, nursing needs to devise ways of intervening that include the forms of care of the newborn for the family, thus promoting a quick recovery and quality of life for the same (GAÍVA and SCOCHI 2004).

During my academic journey, there was an interest in the area of child health. The approach to this theme became more evident and stimulating during the theoretical classes and, especially in a paid internship at a private institution, I had the opportunity to get even closer to this area, being able to experience nursing actions in the neonatal intensive care unit (NICU). The unit aroused my interest due to the complexity of the actions that nurses perform in the care of newborns (NB) and as managers of the sector. During the 2-year paid internship period in the neonatal unit, it was possible to observe and learn about the importance of the care provided by the nurse in the care of the newborn and in the management of the nursing team. In this sector, I checked the turnover of neonates and infants and observed that most of them were premature. From this observation, I began to have questions about: the most frequent profiles that affected the NBs admitted to the NICU, in addition to prematurity, the clinical profile and prognosis of these patients. The NICU is a sector that assists critically ill newborns, who are vulnerable and need specific and continuous care. The structure and organization of the NICU must take into account the therapeutic and technological advances available to meet the new realities of care for critically ill newborns.

Thus, the present study aims to identify the profile and analyze the clinical data of newborns hospitalized in the Neonatal Intensive Care Units of the Institutions of the city of

Cascavel. This study is justified by the need to substantiate the profile of each patient in the unit and the factors that contribute to their hospitalization in that unit. Thus, the research becomes relevant as it is observed the existence of wide availability of scientific material on the subject, which contrasts with the practice observed in the academic experience, becoming indispensable to the socialization of knowledge, provoking a critical reflection on these patients.

In view of this, the following question was raised: what is the clinical profile of newborns hospitalized in neonatology units in the municipality of western Paraná?

2 METHODOLOGY

This is an observational study of the ecological type, with a quantitative approach. Observational research is a study in which the researcher will not be able to intervene on the patient. This type of study describes only the distribution of the disease and other characteristics without concern for causal relationships or other hypotheses, they are designed to investigate a possible cause-and-effect relationship (PORTA, 2008).

Ecological studies are studies in which the unit of analysis is a population or a group of people, which usually belongs to a defined geographical area (city, state, country). They seek to assess how social and environmental contexts can affect the health of population groups. It compares the occurrence of the disease/health-related condition and the exposure of interest among aggregates of individuals (populations of countries, regions or municipalities, for example) to verify the possible existence of an association between them (MORGENSTERN, 1998).

Quantitative research is a type of research that acts on a human or social problem, is based on the testing of a theory and is composed of variables quantified in numbers, which are analyzed statistically, with the aim of determining whether the generalizations predicted in the theory are sustained or not (KNECHTEL, 2014).

In this sense, quantitative research is linked to immediate data, identifying that it is concerned with the quantification of data, proving whether a theory is valid or not based on statistical analyses. It is directly linked to the quantification of data, in experimentation, measurement and strict control of facts, such data will be presented in the form of tables, graphs or texts. It is a research linked to empirical-descriptive research, when one seeks to discover and classify the relationship between variables, the cause and effect relationships between different phenomena (KNECHTEL, 2014)

The field of study of the research will be the database of the DataSUS, which is the computer system of the Unified Health System (SUS). It collects, processes and disseminates health information in Brazil. In addition to providing statistical data on a series of indicators in the country, DataSUS also manages applications and systems widely used by professionals, such as the National Registry of Health Establishments, for example. Gathering the information in a single and integrated platform is part of one of the guidelines of public health in the country and helps to formulate strategies for social control and public policies on the subject in Brazil.

Patients who were admitted to the neonatal intensive care unit (NICU) from January to December 2018. The inclusion criterion will be all patients who have the chosen variables, the other members will be excluded.

Data collection was carried out in the structure of DataSUS, which is divided into some sections, but in this research the Health Information (TABNET) was used, this section is widely used to cross-reference data related to disability, morbidity, access to services, living conditions, quality of health care, and environmental factors. In addition to these, information is also available regarding the care network, registry of outpatient and hospital networks, National Registry of Health Establishments (CNES) and socioeconomic information.

To cross-reference the information, DataSUS provides the TABNET system for the formulation of tables with the indicators. In this research, data from January to December 2018 will be used, data from 2019 were not used as it was not available on the website. For data collection, an instrument will be elaborated by the researchers of the study, which can be found in Appendix A.

The data collection instrument contains the following variables: gender, skin color, type of delivery, gestational age, number of prenatal visits, mother's age, mother's level of education, birth weight, congenital malformation, type of congenital malformation, APGAR, length of hospital stay, hospitalization cost, mortality rate.

For data analysis, simple mathematical and static calculations were used, first the data will be tabulated in Excel, and later the statistical analysis of the same will be done, by means of percentage.

This work is based on Resolution 466, of December 12, 2012, which incorporates, from the perspective of the individual and the collectivities, references of bioethics, such as autonomy, non-maleficence, beneficence, justice and equity, among others, and aims to ensure the rights and duties that concern the research participants, the scientific community and the State.

In view of this, the researchers will comply with all ethical precepts established by law, as well as the collection of data taking into account the confidentiality of these items, there are some researches without direct involvement with human beings, therefore, they do not need approval by the CEP/CONEP System as research that involves only public domain data without identification of the research participants.

3 RESULTS

Data on premature newborns born in 2018 were analyzed, including gestational age at birth (IGN), under 22 weeks had 56% female, between 22 and 27 weeks had 53% male, between 28 and 31 weeks had 53% male, between 32 and 36 weeks had 53% male. The characteristics of the Preterm Newborn (PTNB) are described in the Tables below.

SEX		MALE		FEMALE
	N	%	N	%
LESS THAN 22 s	27	44%	34	56%
22 to 27 sec	383	53%	333	47%
28 to 31 sec	825	53%	744	47%
32 to 36 sec	7479	53%	6572	47%
TOTAL	8.714		7.683	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

Newborns, younger than 22 weeks and presented less than 500 grams were 59%, from 22 to 27 weeks who had 500 to 999 grams reached 70%, from 28 to 31 weeks and had 1500 to 2499 grams reached 31%, from 32 to 36 weeks and had 3000 to 3999 grams reached 20%, the average weight was 500 +- 999 grams. More than half of the Preterm Newborns (PTNB) had a birth weight of less than 2,500 grams.

WEIGHT	Less than 500g		500 to 999g		1000 a 1499		1500 a 2499		2500 a 2999		3000 a 3999		4000g and more	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
LESS THAN 22 s	36	59%	14	23%	-	2%	1	5%	3	5%	6	10%	1	2%
22 to 27 sec	52	7%	499	70%	97	3%	24	2%	13	2%	28	4%	3	0%
28 to 31 sec	5	0%	188	12%	714	31%	487	5%	75	5%	96	6%	4	0%
32 to 36 sec	9	0%	29	0%	356	43%	6106	32%	4533	32%	2879	20%	142	1%
TOTAL	102		730		1.167		6.618		4.624		4.624		3.009	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

Complications at birth of PTNB were also investigated, related to malformations such as: spina bifida, other congenital malformations of the nervous system, congenital malformations of the circulatory system, cleft lip and palate, absence or atresia and stenosis of the small intestine, other congenital malformations of the digestive system, undescended testicle, other malformations of the genitourinary system, congenital deformities of the feet, other malformation and congenital deformity musculoskeletal system, other congenital malformations, chromosomal abnormalities not classified in other pathology (NCOP), without congenital anomaly/not reported.

Patients who present some type of malformation are 3% of newborns younger than 22 weeks, between 22 and 27 weeks had 2%, between 28 and 31 weeks had 4%, and between 32 and 36 weeks had 2%. Each one is described in the table below:

CONGENITAL ANOMALY		Yes		No		Ignored
	N	%	N	%	N	%
LESS THAN 22 s	2	3%	56	92%	3	5%
22 to 27 sec	17	2%	682	95%	17	2%
28 to 31 sec	58	4%	1495	95%	16	1%
32 to 36 sec	259	2%	13732	98%	63	0%
TOTAL	336		15.965		99	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

Regarding the characterization of the maternal profile, it was evidenced that mothers constitute a percentage of young adult women, with a higher percentage in newborns under 22 weeks were in mothers between 20 and 24 years old with 27%, between 22 and 27 weeks were in mothers between 20 and 24 years old with 25%, between 28 and 31 weeks were in mothers between 25 and 29 years old with 23%, between 22 and 27 weeks were in mothers between 20 and 24 years old with 25%, between 22 and 27 weeks were in mothers between 20 and 24 years old with 25%, between 28 and 31 weeks were in mothers between 25 and 29 years old with 23%, between 32 and 36 weeks were in mothers between 25 and 34 years old with 24%. The variables are described in the table.

MOTHER'S AGE	10 a 14		15 a 19		20 a 24		25 a 29		30 a 34		35 a 39		40 a 44		45 a 49		50 a 59	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
LESS THAN 22 s	2	3 %	11	18 %	16	26 %	10	16 %	11	18 %	7	11 %	4	7 %	-		-	-
22 to 27 sec	7	1 %	125	17 %	172	24 %	152	21 %	139	13 %	91	13 %	30	4 %	-		-	
28 to 31 sec	22	1 %	234	15 %	314	20 %	345	22 %	334	16 %	253	4 %	57	1 %	9		1	
32 to 36 sec	69	0 %	1735	12 %	3023	22 %	3257	23 %	3179	15 %	2168	4 %	577	0 %	40	1 %	6	0 %
TOTAL	100		2.105		3.525		3.764		3.663		2.519		688		49		7	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

The marital status of mothers of newborns, under 22 weeks was 43% married, 34% single, in a consensual union 21%, from 22 to 27 weeks was 45% single, 35% married, in a consensual union 17%, legally separated 2%, from 28 weeks was 45% single, 36% married, 16consensual union, legally separated 2%, from 32 to 36 weeks was 40% single, 39% married, in a consensual union 18%, legally separated 2%.

MARITAL STATUS	Single		Married woman		Widow		Separate		Consensual union		Ignored	
	N	%	N	%	N	%	N	%	N	%	N	%
LESS THAN 22 s	21	34 %	26	43 %	-	-	-	-	13	21%	1	2%
22 to 27 sec	316	45 %	251	35 %	1	0%	15	2%	121	17%	5	1%
28 to 31 sec	702	45 %	571	36 %	3	0%	34	2%	250	16%	8	1%
32 to 36 sec	5633	40 %	5528	39 %	34	0%	231	2%	2518	18%	67	0%
TOTAL	6.672		6.376		38		280		2.902		81	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

Regarding the education of mothers, of newborns under 22 weeks was 64% from 8 to 11 years old, 23% from 12 years or older, 11% from 4 to 7 years old, 22 to 27 weeks old was 57% from 8 to 11 years old, 26% from 12 years old or older, 15% from 4 to 7 years old, 1% from 1 to 3 years old, 28 to 31 weeks was 57% from 8 to 11 years, 25% from 4 to 7 years, 2% from 1 to 3 years, 32 to 36 weeks was 57% from 8 to 11 years, 25% from 12 years or older, 15% from 4 to 7 years, 2% from 1 to 3 years

MOTHER'S INSTRUCTION	No		1 to 3 years		4 to 7 years		8 to 11 years		12 years or older		Ignored	
	N	%	N	%	N	%	N	%	N	%	N	%
LESS THAN 22 s	-	-	-	-	7	11 %	39	64 %	14	23%	1	2%
22 to 27 sec	2	0%	10	1%	106	15 %	409	57 %	184	26%	5	1%
28 to 31 sec	3	0%	35	2%	247	16 %	890	57 %	390	25%	4	0%
32 to 36 sec	32	0%	216	2%	2122	15 %	8071	57 %	3563	25%	50	0%
TOTAL	37		261		2.482		9.409		4.151		60	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

Regarding the variable type of delivery, a higher prevalence of vaginal deliveries was identified in children under 22 weeks with 80% and 20% cesarean delivery, between 22 and 27 weeks, 52% vaginal births, 48% cesarean delivery, from 28 to 31 weeks, 70% cesarean delivery, 30% vaginal births, from 32 to 36 weeks, 65%, cesarean delivery, 35% vaginal births.

TIPO DE PARTO		Vaginal		Cesario
	N	%	N	%
LESS THAN 22 s	49	80%	12	20%
22 to 27 sec	369	52%	346	48%
28 to 31 sec	473	30%	1096	70%
32 to 36 sec	4871	35%	9179	65%
TOTAL	5.762		10.633	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

Regarding the type of pregnancy, there was a prevalence in single pregnancies in newborns with less than 22 weeks with 75%, double gestation with 20%, triple gestation or more had 5%, from 22 to 27 weeks with 81% single pregnancy, in double gestation with 17%, in triple gestation or more had 2%, from 28 to 31 weeks with 81% single pregnancy, in double gestation with 18%, in triple pregnancies or more it had 1%, from 32 to 36 weeks single gestation it had 86%, in double gestation with 13%, in triple pregnancies or more it had 1%.

TYPE OF PREGNANCY	Unique		Couple		Triple or more		Ignored	
	N	%	N	%	N	%	N	%
LESS THAN 22 s	46	75%	12	20%	3	5%	-	-
22 to 27 sec	581	81%	119	17%	16	2%	-	-
28 to 31 sec	1271	81%	277	18%	19	1%	2	0%
32 to 36 sec	12091	86%	1874	13%	74	1%	15	0%
TOTAL	13.989		2.282		112		17	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

The Apgar index was evaluated in the first minute of life, verifying that in the 1st minute in preterm infants under 22 weeks it is between 3-5 13%, from 22 to 27 weeks it is between 3 to 5 with 33%, from 28 to 31 weeks it is between 8 to 10 with 43%, from 32 to 36 seconds it is between 8-10 76%.

APGAR 1ST MINUTE OF LIFE	0 a 2		3 a 5		6 a 7		8 a 10		Ignored	
	N	%	N	%	N	%	N	%	N	%
LESS THAN 22 s	36	59%	8	13%	7	11%	7	11%	3	5%
22 to 27 sec	200	13%	233	33%	134	19%	132	18%	17	2%
28 to 31 sec	144	11%	287	18%	454	29%	672	43%	12	1%
32 to 36 sec	27	11%	894	6%	2196	16%	10624	76%	53	0%
TOTAL	667		1.422		2.791		11.435		85	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

In the 5th minute apgar index in preterm infants less than 22 weeks is between 0-2 with 54%, from 22 to 27 weeks it is between 8-10 with 42%, from 28 to 31 weeks it is between 8-10 with 76%, from 32 to 36 seconds it is between 8-10 94%.

APGAR 5TH MINUTE OF LIFE	0 a 2		3 a 5		6 a 7		8 a 10		Ignored	
	N	%	N	%	N	%	N	%	N	%
LESS THAN 22 s	33	54%	5	8%	5	8%	14	23%	4	7%
22 to 27 sec	77	11%	116	16%	209	29%	298	42%	16	2%
28 to 31 sec	38	2%	83	5%	248	16%	1189	76%	11	1%
32 to 36 sec	57	0%	150	1%	583	4%	13216	94%	48	0%
TOTAL	205		354		1.045		14.717		79	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

Prevalence of white color/race in newborns less than 22 weeks with 67%, at 22 to 27 weeks with 72%, at 28 to 31 weeks with 73%, at 32 to 36 weeks with 73%.

COLOR/RACE	White		Black		Yellow		Curtain		Indigenous		Ignored	
	N	%	N	%	N	%	N	%	N	%	N	%
LESS THAN 22 s	41	67%	-	-	2	3%	17	28%	-	-	1	2%
22 to 27 sec	516	72%	25	3%	3	0%	158	22%	7	1%	7	1%
28 to 31 sec	1149	73%	49	3%	3	0%	348	22%	4	0%	16	1%
32 to 36 sec	10250	73%	386	3%	59	0%	3182	23%	51	0%	126	1%
TOTAL	11.956		460		67		3.705		62		150	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

Prenatal follow-up was found in 87% among pregnant women in the survey, carried out in the SUS, consultations in newborns under 22 weeks had the highest rate with 48% in 4 to 6 consultations, in 22 to 27 weeks had the highest rate with 44% in 4 to 6 consultations, in 28 to 31 weeks had the highest index with 50% in 7 or more consultations, At 32 to 36 weeks, it had the highest rate, with 74% in 7 or more visits.

Prenatal consultations	None		1 to 3 consultations		4 to 6 consultations		7 or more queries		Ignored	
	N	%	N	%	N	%	N	%	N	%
Less than 22s	4	7%	16	26%	29	48%	12	20%	-	
From 22 to 27s	28	4%	146	20%	314	44%	227	32%	1	0%
From 28 to 31s	42	3%	151	10%	592	38%	781	50%	3	0%
32 to 36s	159	1%	672	5%	2790	20%	10410	74%	23	0%
TOTAL	233		985		3.725		11.430		27	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

According to the amount of adequate prenatal care in newborns under 22 weeks, 7% did not receive prenatal care, 13% were inadequate, 48% were intermediate, 7% were adequate, 20% were more than adequate, 7% were not classified, from 22 to 27 weeks, 3% were not provided with prenatal care, 17% were inadequate, 35% were intermediate, 12% were adequate, 30% were more than adequate, 3% were not classified, from 28 to 31 weeks, 2% were not provided with prenatal care, 15% inadequate, 20% intermediate, 14% adequate, 46% more than adequate, 3% unclassified, from 32 to 36 weeks, 1% did not receive prenatal care, 14% inadequate, 7% intermediate, 8% adequate, 69% more than adequate, 2% unclassified.

Adequateq. Prenatal quantity	It didn't		Inadequate		Intermediary		Adequate		More than adequate		Unclassified	
	N	%	N	%	N	%	N	%	N	%	N	%
Less than 22s	4	7%	8	13%	29	48%	4	7%	12	20%	4	7%
From 22 to 27s	22	3%	123	17%	252	35%	87	12%	214	30%	18	3%
From 28 to 31s	28	2%	242	15%	312	20%	213	14%	725	46%	49	3%
32 to 36s	93	1%	1942	14%	1008	7%	1148	8%	9641	69%	222	2%
TOTAL	61		716		1.569		1.452		10.592		293	

Source: MS/SVS/DASIS - Information System on Live Births - SINASC

4 DISCUSSION

It is important to highlight that the variables studied consist exclusively of newborns hospitalized in a Neonatal ICU in the central-western region of Paraná, which receives patients from the maternity hospitals themselves, as well as from other maternity hospitals in the state. It is understandable that there is no agreement among all services regarding the direction of specific conducts for all conditions that affect neonates who need the Neonatal ICU and that human and technological conditions are not comparable among all services.

Regarding gender, there was a predominance of males, corresponding to 53%. Studies confirm that males have the slowest lung maturity process, contributing to premature birth, while females are considered a protective factor for faster lung maturation (SOUZA, 2013). Thus, a sharper look at the male gender can be recommended, due to their fragility acquired at conception.

Among the main causes of hospitalization, in order of occurrence, is prematurity (100%), the next ones are low birth weight (70%), among newborns from 22 to 31 weeks. Low birth weight and prematurity are risk factors for infant mortality, especially in the first months of life (SOUZA, 2013).

According to data from the Ministry of Health, children weighing less than 2,500 grams are considered underweight, increasing the risk of morbidity and mortality. Compared to another study (UNICEF, 2015), also conducted in the southern region of Brazil in 2012, the profile found is similar in relation to the causes of hospitalization, reinforcing what has been stated in the national literature on neonatal mortality as a public health problem (UNICEF, 2013). Low birth weight and prematurity are risk factors, due to the vulnerability of the child population, i.e., the lower the weight and gestational age, the greater the probability of morbidity. The high incidence of low birth weight and prematurity are public health problems for many countries, and are present in those with less favored socioeconomic conditions, such as Brazil (SOUZA, 2013).

The prevalence of newborns with congenital anomalies in the NICU (14.3%) was similar to the result found in a study conducted in Turkey, where the prevalence was 13.7% (DURSUN, 2014). In comparison, the European Surveillance of Congenital Anomalies (EUROCAT) recorded a total prevalence of congenital anomalies of 2% between 2003 and 20126, and in a study conducted in the United States of America (USA) from 2011 to 2013 the prevalence found was 3% (ALMI, 2011). However, both studies are population-based, which justifies the higher frequency found in this study with neonates admitted to the ICU of a hospital, which is a reference for high-risk pregnancies.

In the present study, the following malformations were investigated: spina bifida, other congenital malformations of the nervous system, congenital malformations of the circulatory system, cleft lip and palate, absence or atresia and stenosis of the small intestine, other congenital malformations of the digestive tract, undescended testicle, other malformations of the genitourinary system, congenital deformities of the feet, other malformations and congenital deformity of the musculoskeletal system, other congenital malformations, chromosomal abnormalities not classified in other pathology (NCOP), no congenital anomaly/not reported.

Patients who present some type of malformation are 3% of newborns younger than 22 weeks, between 22 and 27 weeks had 2%, between 28 and 31 weeks had 4%, and between 32 and 36 weeks had 2%.

Maternal age is a risk factor for abnormal intrauterine fetal development; advanced maternal age (≥ 35 years) can be associated with increased risk for Down syndrome (GLIVETICl, 2015) and chromosomal abnormalities (ZILE, 2013), as in this study this association was also shown to be true.

According to the Ministry of Health, very young mothers are considered a risk factor with high predictive value for delayed motor and cognitive development in premature infants (MELO; CARVALHO, 2014). In this present study, the majority of mothers are not adolescents, in total they make up 8.3%, adults are 91.2%, there was a prevalence of single mothers with 41%, even so, there was no significant difference between the other groups, 38.2% of married women, in consensual unions 18%, and separated women 2%. The way women understand and experience the experience of motherhood and the marital relationship has undergone changes in recent decades, despite the widespread and acceptance of the notion of maternal instinct and the nuclear family model. The burden on the woman/mother is still very great, since the idea of the woman as the sole or main responsible for the children remains (as the myth of maternal love proposes) and also for their "prevention" (they are the ones who should "avoid" the children), often being "abandoned" by the child's father, who does not see himself as directly responsible (ESTEVES, 2003).

In this present study, the marital status of mothers of newborns was identified: under 22 weeks old, 43% were married, 34% were single, 21% were in a consensual union, 45% were single from 22 to 27 weeks, 35% were married, 17% were in a consensual union, 2% were legally separated, 28 weeks were 45% were single, 36% were married, 16 were in a consensual union, 2% were legally separated, 2% were legally separated. From 32 to 36 weeks, 40% were single, 39% were married, 18% were in a consensual union, 2% were legally separated.

Women with inadequate schooling for their age were associated with prematurity, and these women are twice as likely to have a premature birth. In a study conducted in Quebec, Canada, prematurity rates decreased with increasing schooling, being 7.9% in women with less than 11 years of schooling and 4.9% in women with more than 17 years of schooling. Another study found that the adjusted risk for preterm birth was 92% higher in women with less schooling when compared to those with higher schooling (SILVA, 2009).

Therefore, the lower the level of education, the lower the degree of understanding of the specific needs and care for a healthy pregnancy and, subsequently, with the birth of the child. The result of this study was 24.7% between 12 and over, 14.2% between 4 and 7 years, 58.7% between 8 and 11 years and 1.6% between 1 and 3 years of study.

Comparing the index related to the type of delivery, mainly, cesarean section, this was the main method of parturition in this study regarding the variable type of delivery, a higher prevalence of vaginal deliveries was identified in children under 22 weeks with 80% and 20% cesarean delivery, between 22 and 27 weeks 52% vaginal deliveries, 48% delivery by cesarean section, from 28 to 31 weeks 70% delivery by cesarean section 30% vaginal births, from 32 to 36 weeks 65% delivery by cesarean section 35% vaginal births. Its indication occurs mainly due to preeclampsia, urinary tract infection, preterm labor and ruptured pouch. According to the WHO, only 15% of total births in a country should occur surgically (Ministry of Health, 2011 eat HÕFELMANN, 2012).

Despite this recommendation, the rates of surgical deliveries are still high and, in this study, the rates are similar to those found in most Brazilian regions, which are above 32.0%. Cesarean section is a surgical procedure designed to save the life of the mother and/or child when complications occur during pregnancy or childbirth. Like any surgical procedure, cesarean section is not risk-free and is associated, in Brazil and in other countries, with higher maternal and infant morbidity and mortality when compared to vaginal delivery (HÕFELMANN, 2012).

Current studies mention that the increase in cesarean section rates is related to the increasing rates of scheduled cesarean sections with undue termination of pregnancy, without medical justification, resulting in prematurity and increased risk of infant and perinatal death, even among late preterm newborns with adequate birth weight (HÕFELMANN, 2012).

Regarding the type of pregnancy, there was a prevalence in single pregnancies in newborns with less than 22 weeks with 75%, double gestation with 20%, triple gestation or more had 5%, from 22 to 27 weeks with 81% single pregnancy, in double gestation with 17%, in triple gestation or more had 2%, from 28 to 31 weeks with 81% single pregnancy, in double gestation

with 18%, in triple pregnancies or more it had 1%, from 32 to 36 weeks single gestation it had 86%, in double gestation with 13%, in triple pregnancies or more it had 1%.

The Apgar score was created in 1952 and is one of the most widely used methods for the immediate evaluation of newborns after birth, capable of assessing responsiveness and physiological conditions, helping to identify the need for resuscitation or other special care (SILVA, 2009). It is performed in the first and fifth minutes of life, and five aspects are evaluated and scored from zero to ten (heart rate, breathing, color, muscle tone, and reflexive irritability). A value from 0 to 3 is considered severe, from 4 to 7 moderate, and from 8 to 10 normal (CARVALHO, 2014). In this study, the Apgar score was evaluated in the first minute of life, and in preterm infants under 22 weeks it is between 3-5 13%, from 22 to 27 weeks it is between 3 to 5 with 33%, from 28 to 31 weeks it is between 8 to 10 with 43%, from 32 to 36 weeks it is between 8-10 76%.

In a study on infant mortality, carried out in Porto Alegre in 2012, 20.3% of premature infants had an index lower than 7 in the fifth minute of life, and of these, 70% died (SILVA, 2009), proving the relationship between the Apgar score and infant mortality. For a period of time, neonatal medicine stated that a score from 0 to 3 in the 1st minute of life determined respiratory ventilation as the most appropriate resuscitation maneuver. In this study, the 5th minute apgar score in preterm infants less than 22 weeks is between 0-2 with 54%, from 22 to 27 weeks it is between 8-10 with 42%, from 28 to 31 weeks it is between 8-10 with 76%, from 32 to 36 seconds it is between 8-10 94%.

New knowledge, such as the determination of the blood pH of the fetus, has changed this concept and the score of 6 or less in the 5th minute has become the most important reference in diagnosis and prognosis, along with the proposal not to wait for the score of the 1st minute to start resuscitation maneuvers (SILVA, 2009). Despite this, the score in the 1st minute still seems to be important in the prognosis of mortality. Respiratory dysfunction in infants in the neonatal period can be a symptom of several diseases, which appear during the period of immediate adaptation to extrauterine life, depending mainly on adequate cardiopulmonary function. It can appear due to changes in the frequency, rhythm and periodicity of breathing, flaring of the nose wing, moaning, chest retractions and changes in skin color (ALMI, 2011).

One of the strategies to promote lung maturity in cases of premature birth, as well as respiratory syndromes, is the use of surfactant. Of the total sample of this study, 19.0% used it. Its objective is to stabilize the alveoli and reduce the risk of death by increasing the functional

residual capacity of the lung and, thus, improving the ventilation-perfusion ratio, correcting hypoxemia (ALMI, 2011).

Thus, the association of race/color with a higher risk of unfavorable outcome, both obstetric and neonatal, was not revealed when the effects of confounding variables were isolated. Although there is evidence of the genetic predisposition of the black population to some diseases, the phenotypic classification does not represent biological homogeneity, since there may be greater genetic variation among individuals with the same phenotypic characteristics. In addition, it is difficult to measure the impact of colonization and consequent miscegenation on the genetic component (GOODMAN, 2000). In this study, there was a prevalence of white color/race in newborns under 22 weeks with 67%, at 22 to 27 weeks with 72%, at 28 to 31 weeks with 73%, at 32 to 36 weeks with 73%.

Early initiation of prenatal care is an essential condition for adequate care for pregnant women, for the initial assessment of gestational risks and the opportunity to link this woman to care throughout pregnancy, prenatal consultations should be at least six consultations, when pregnancy is not detected in the first consultation as being at risk (RAMOS eat CULMANN 2009).

The number of consultations in this study showed that 44% of the pregnant women had seven or more consultations, 37.5% had 4 to 6 consultations, 15.2% had 1 to 3 consultations and 3.5% had no consultations at all. The absence of prenatal care is associated with the risk of prematurity, low birth weight, maternal and infant mortality (RAMOS; CULMANN, 2009).

Knowing the main hospitalization diagnoses and the main reasons for premature births, it is suggested to carry out relationship studies to compare the variables studied, enhancing the understanding of the findings, as well as studies of interventions carried out after the identification of results similar to those of this study, in order to identify whether the profile of those hospitalized in the Neonatal ICU is known. It is possible to intervene to prevent and avoid damage and sequelae.

As it is a small sample, the results were only descriptive, this reality will serve for new studies that may reflect on the referral of health care actions with this population and with women of childbearing age.

5 CONCLUSION

The objective of this study was to delineate the clinical aspects of newborns admitted to the neonatal intensive care unit in a city in western Paraná. Based on the results of this study, we

can identify that the newborns, most of them were male, born by cesarean section, most of them considered adequate for gestational age (AGA), being less than 2,500 grams, with apgar score at the 1st and 5th minutes considered between normal and moderate.

Considering the studies cited above, it shows that low birth weight and prematurity are a problem that is difficult to control, since the prevention of this condition becomes a task that involves the quality of health and life of the population. There is a need to outline actions in public and private health with a focus on prenatal work, identifying early signs of risk or alteration during pregnancy, reducing the incidence of premature births and neonatal complications.

Neonates who require hospitalization after birth are very vulnerable and require assistance in addition to hemodynamic stability, they need comprehensive care, quality of life inside and outside the hospital. With this in mind, there has been an increase in questions about hospital risk factors that, in addition to reducing the present health standard, have harmful effects in the future.

It is worth mentioning that child hospitalization and its negative effects have repercussions not only on the baby's life, but also alter the entire family dynamic, generating different feelings resulting from the loss of control in the family's functioning, insecurities about the ability to regain balance and doubts related to the situation experienced. The improvement in the survival of these babies imposes a challenge on health professionals: to return to families and society a child capable of fully developing their affective, cognitive and productive potential.

Thus, many health professionals are investigating, researching, rethinking their practices and adequacies according to the needs of the clientele, seeking to ensure not only the reestablishment of health within the hospital environment, but also after discharge, and it can be affirmed that the search for knowledge contributes to a more critical and conscious view of the newborn and its family. emphasizing the holistic view of the NB. When we think about the care provided to newborns, the life that has begun and is constantly growing and forming, care must cross the hospital walls, becoming long-term.

The nursing team that works in the NICU is in a constant search for the quality of care provided to the newborn. If nursing caregivers know the needs of the newborn and the risk to which they are exposed during hospitalization in the neonatal ICU, they can provide conditions for their stay to be as less traumatic as possible so that they do not affect their physical, mental and social development.

This study is important because it made it possible to trace the profile of newborns hospitalized in the Neonatal ICU, and thus understand the context of hospitalizations, in order to propose improvements in the care provided in an individualized and comprehensive manner, to outline actions in public and private health with a focus on women's health work and especially in the period of quality prenatal care and starting in the first trimester of pregnancy, identifying early signs of risk or alteration during pregnancy and thinking about actions to reduce the incidence of premature births and neonatal complications, avoiding the loss of newborns and these women.

However, this research allowed us to get to know the studied population under the aspects of their growth and practices carried out in the unit, bringing contributions to the service, enabling changes in the management of these babies and all those who contribute to their development.

My brother, Elias, who listened to my outbursts and my complaints, and always helped me, exchanged various ideas of motivation to improve my studies, and was always present in my choices;

To my grandparents Jacira and Abrão who has always been with me on this journey, always trusting and believing in my potential, and always praying for me, today my grandfather is not present among us, but I know from heaven and looks at me and seeing a dream of his come true.

To my boyfriend Junior who has always been by my side, believing, trusting that everything would work out;

And finally I thank my Advisor, my example of a professional and of life to follow, thank you for not giving up on me when I had already given up, for believing that it was possible when I didn't believe, today I can say that you are the essence of this research to exist, because, a few days ago, when nothing was easy, you brought me reality, and I found out that I can do it, THANK YOU.

Therefore, I thank God for so many wonderful people who have crossed my path so far, without him I would not have been building this path. May I bring joy to those who believed in me, thank you God for making me capable.

INTERNATIONAL SEVEN JOURNAL
OF HEALTH RESEARCH
ISSN: 2764-9415

ACKNOWLEDGMENT

In these five years of study, there were many challenges encountered, and in the face of them, many people were by my side so that I could move forward and today I am completing this stage. Thus, I thank my class, for sharing knowledge and enriching my graduation, and the professors who distributed their knowledge and today I can appropriate them to exercise the profession in the best way. I thank the people I may not specifically mention here, but who follow me and cheer for my success.

Also, I would like to thank some special people. First of all, I thank my family: My mother Lindaura, who motivated me when I could no longer follow, gave me a lap when I had no strength and helped me to face all the phases of my life, thanks to her who always worked and made a lot of effort, today I am completing my degree. Thank you mom for dreaming together with me;

To my father Edivaldo, who was one of the great responsible for me to complete the objectives of the course and achieve the final success, he always believed in my potential.

REFERENCES

Abrahão, A. L. C. L. (2015). A Unidade de Terapia Intensiva. In: Cheregatti, A. L., & Amorim, C. P. (Eds.), Enfermagem em Unidade de Terapia Intensiva. São Paulo: Martinari, 15-39.

Alfaro-Lefevre, R. (2005). Aplicação do processo de enfermagem: promoção do cuidado colaborativo. (5th ed.). Porto Alegre (RS): Artmed.

Almli, L. M., Alter, C. C., Russell, R. B., Tinker, S. C., Howards, P. P., Cragan, J., et al. (2017). Association Between Infant Mortality Attributable to Birth Defects and Payment Source for Delivery - United States, 2011-2013. MMWR Morb Mortal Wkly Rep, 66(3), 84-87.

Amorim, M. M. R., et al. (2010). Indicações de cesariana baseados em evidências: parte I. Femina Agosto 2010, 38(8).

Andreucci, C. B., & Cecati, J. G. (n.d.). Desempenho de indicadores de processo do Programa de Humanização do Pré-natal e nascimento no Brasil: uma revisão sistemática. Caderno Saúde Pública [online], 27(6), 1053-1064.

Barreto, M. L., & Carmo, E. H. (1995). Mudanças em padrões de morbimortalidade: conceitos e métodos. In: Monteiro CA (Ed.), Velhos e novos males da saúde no Brasil. A evolução do país e de suas doenças. São Paulo: Editora Hucitec/Universidade de São Paulo, 17-30.

Brasil. Ministério da Saúde, Secretaria de Atenção à Saúde. (Year). Title.

Busko, M., & Murata, P. (2008). Neonates in intensive care endure painful procedures, mostly without analgesia.

Dursun, A., Zenciroglu, A., Hakan, N., Karadag, N., Karagol, B. S., Aydin, B., et al. (2014). Distribution of congenital anomalies in a neonatal intensive care unit in Turkey. J Matern Fetal Neonatal Med, 27(10), 1069-1074.

Esteves, J. R. (2003). Trajetórias de vida: Repercussões da gravidez adolescente na biografia de mulheres que viveram tal experiência. [dissertação]. Vitória(ES): Programa de Pós-Graduação em Psicologia, Universidade Federal do Espírito Santo.

Gil, A. C. (2008). Como elaborar projetos de pesquisa. (4th ed.). São Paulo: Atlas.

Glivetic, T., Rodin, U., Milosevic, M., Mayer, D., Filipovic-Grcic, B., & Seferovic, S. M. (2015). Prevalence, prenatal screening and neonatal features in children with Down syndrome: a registry-based national study. Ital J Pediatr, 41, 81.

Goodman, A. H. (2000). Why genes don't count (for racial differences in health). Am J Public Health, 90(11), 1699-1702.

Knechtel, M. R. (2014). Metodologia da pesquisa em educação: uma abordagem teórico-prática dialogada. Curitiba: Intersaberes.

Lemos, R. A., et al. (2010). Estudo da prevalência de morbidades e complicações neonatais segundo o peso ao nascimento e a idade gestacional em lactentes de um serviço de follow-up. Revista de APS, 13(3), 277-290.

Melo, W. A., & Carvalho, M. D. B. (2014). Análise Multivariada dos fatores de riscos para prematuridade no Sul do Brasil. Revista Eletrônica Gestão & Saúde, 05(02), 398-409. ISSN: 1982-4785.

Morgenster, H. (1998). Ecologic studies. In: Rothman KJ, Greenland S. Modern Epidemiology. (2nd ed.). Philadelphia: Lippincott-Raven, 459-480.

Nascimento, E. R. P., & Trentini, M. (n.d.). O cuidado de enfermagem na unidade de terapia intensiva (UTI): teoria humanística de Paterson e Zderad. Rev. Latino-Am. Enfermagem, 12(2), 250.

Novaretti, M. C. Z., et al. (2014). Sobrecarga de trabalho da Enfermagem e incidentes e eventos adversos em pacientes internados em UTI. Rev. bras. enferm., 67(5), 692-699.

Porta, M., Greenland, S., & Last, J. (2008). A dictionary of Epidemiology. (5th ed.). Oxford: Oxford University Press.

Ramos, A. H. C., & Cuman, R. K. N. (2009). Fatores de Risco para prematuridade: Pesquisa Documental. EscAnnaNery Rev Enfermagem, 13(2), 297-304.

Silva, A. M. R., Almeida, M. F., Matsuo, T., & Soares, D. A. (2009). Fatores de risco para nascimentos pré-termo em Londrina, Paraná, Brasil. Cad Saúde Pública, 25(10), 2125-2138.

Silva, T. H., & Fensterseifer, L. M. (2015). Prematuridade dos recém-nascidos em Porto Alegre e seus fatores associados. Revista Brasileira de História & Ciências Sociais - RBHCS, 7(13). DOI: http://dx.doi.org/10.14295/rbhcs.v7i13.305.

Souza, K. C. L., Campos, N. G., & Júnior, F. F. U. S. (2013). Perfil dos recém-nascidos submetidos à estimulação precoce de uma Unidade de Terapia Intensiva Neonatal. Rev Bras Promoc Saúde [periódico na Internet], 26(4). Disponível em: http://ojs.unifor.br/index.php/RBPS/article/viewFile/3117/pdf.

Szklo, M., & Nieto, J. F. (2000). Basic study designs in analytical epidemiology. In: Epidemiology: beyond the basics. Gaithersburg: Aspen Publishers Inc.

Thiollent, M. (1986). Metodologia da pesquisa-ação. (2nd ed.). São Paulo: Cortez.

Tozoni-Reis, M. F. de C. (2007). Metodologia da pesquisa científica. Curitiba: IESDE.

Tamez, R. N., & Silva, M. J. P. (2009). Enfermagem na UTI Neonatal: Assistência ao recém-nascido de alto risco. (3rd ed.). Rio de Janeiro: Guanabara Koogan.

Von Elm, E., Altman, D. G., Egger, M., & Porta, M. (2008).

World Health Organization (WHO). (2016). Congenital anomalies. [Internet]. [cited 2016 Dec 7]. Available from: http://www.who.int/mediacentre/factsheets/fs370/en/.

INTERNATIONAL SEVEN JOURNAL
OF HEALTH RESEARCH
ISSN: 2764-9415

APPENDIX A

Questionnaire to identify the clinical aspects of patients admitted to the neonatal intensive care unit

1. Date of collection:_____
2. Questionnaire number:_____

1.	Gender RN	( ) Female ( ) Male
2.	Color/Race	
3.	Tipo de parto	( ) Normal Delivery ( ) Cesarean Delivery
4.	Gestational age	( ) < 37 weeks
5.	Number of prenatal visits	
6.	Mother's age	
7	Mother's Education Level	
8.	Birth weight	(< 2.500g () > 2.500g
9.	Congenital malformation	( ) Yes ( ) No
10.	Type of congenital malformation	
11.	APGAR	1st minute _____5th minute _____