Clinical profile of patients hospitalized in neurology units

Perfil clinico de pacientes internados em unidades de neurologia

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RESUMO

Objetiva-se identificar o perfil clínico e sociodemográfico de pacientes internados em unidade de neurologia. Trata-se de um Estudo documental, retrospectivo, com abordagem quantitativa. A pesquisa foi realizada em um Hospital Terciário, localizado em Fortaleza, entre o período de dezembro de 2017 e março de 2018, tendo uma amostra de 184 prontuários. Os dados foram coletados por meio um instrumento com perfil sociodemográfico e clínico e analisados por meio de um Software estatístico. Houve predominância do sexo masculino representando 83,2%, com idade média entre 38,3, de cor parda (77,7%) e natural do interior (60,3%) do Ceará. Os diagnósticos médicos mais encontrados foram o de traumatismo cranioencefálico (54,8%) e trauma raquimedular (26%). Quanto ao desfecho dos pacientes, destaca-se que 88% obtiveram alta hospitalar, sendo que 28,8% apresentaram complicações neurológicas. Com uma média de 26 dias de internação hospitalar. Conclui-se o destaque da importância das tecnologias para adquirir todas as informações sobre o paciente e, assim, a partir das suas individualidades, realizar as intervenções necessárias para o cuidado do mesmo.

Palavras-chave: Cuidados de Enfermagem; Enfermagem em Neurociência; Enfermagem de Cuidados Críticos.

ABSTRACT

The objective was to identify the clinical and sociodemographic profile of patients hospitalized in a neurology unit. This is a retrospective, documentary study with a quantitative approach. The study was conducted in a Tertiary Hospital, located in Fortaleza, between December 2017 and March 2018, with a sample of 184 medical records. Data were collected through an instrument with sociodemographic and clinical profile and analyzed using statistical software. There was a predominance of males, representing 83.2%, with a mean age of 38.3, brown (77.7%) and from the countryside (60.3%) in Ceará. The most frequent medical diagnoses were traumatic brain injury (54.8%) and spinal cord trauma (26%). Regarding the patients' outcome, 88% were discharged from hospital, and 28.8% presented neurological complications. With an average of 26 days of hospitalization. The conclusion of the importance of the technologies to acquire all the information about the patient and, from their individualities, to carry out the necessary interventions for the care of the same.

Keywords: Nursing Care; Nursing in Neuroscience; Critical Care Nursing.

NOTA

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INTRODUCTION

Neurological diseases are those that affect the brain, spinal cord, nerves and muscles. These problems are multifactorial and compromise the human body in a multisystemic way, most frequently Traumatic Brain Injury (TBI) and stroke, which are the main cause of death in young adults in the world and third cause of death in developing countries, respectively. [1-3]

The patient affected by a neurological pathology requires rapid identification and effective follow-up of the health team, in order to avoid sequels that constitute the loss of voluntary control of muscular movements, sensory problems, incontinence, and communication and speech disorders, which impairs emotional, physical and social health of the affected person. Such difficulties and / or incapacities occur due to the various diseases, traumas, that can affect the nervous system of the victim. [4]

Within this context, nurses must know the changes that can occur in the patient to be able to act correctly, since much of the nursing care is based on care, clinical reasoning and continuous evaluation. The nursing assessment of the patient's neurological condition incorporates monitoring of the level of consciousness, glasgow scale to pupillary reaction, motor functions and observation of vital signs. [4-6]

Thus, understanding the causes and consequences of an illness is paramount during the health-disease process, in order to establish a diagnosis and contribute to the actions of prevention, control, care and education. [7]

In this context, health professionals, especially nurses, stress the importance of qualifying practical and theoretical knowledge regarding neurological care, in order to offer quality care. Thus, knowing the incidence of diagnoses in neurological patients is consistent with the national morbidity and mortality profile, as well as providing subsidies for the nurse's work with greater safety in this field, in order to distinguish and provide care to the particularities of each patient.

In view of these findings, the following question was raised: what is the clinical and sociodemographic profile of neurological patients? From the foregoing, the study aimed to identify the clinical and sociodemographic profile of patients hospitalized in a neurology unit.

METHOD

Documentary study, retrospective, with quantitative approach.

The research was carried out in a Tertiary Hospital, located in Fortaleza, Ceará. This is considered the largest emergency and emergency medical center, having two units exclusively for neurological patients. [8]

The sample used is of the probabilistic and systematic type, being calculated based on the formula for finite populations, which is indicated for the calculation of the sample for cross-sectional studies. [9] With this, a population of three hundred and fifty-five (355) medical records was obtained, reaching a total value used to sample the study equal to one hundred and eighty-four (184) medical records to be collected in neurology units.

The data collection period occurred between the months of December 2017 and March 2018. The collection was carried out by means of an instrument constructed by the authors, contemplating variables referring to the sociodemographic and clinical profile. Completion of the form was done through the collection of the information contained in the medical records used by the institution itself, which is filled by the professionals involved in customer care. Patients who met the following inclusion criteria participated in the study: having been admitted to the neurology units of said hospital, had a medical diagnosis, according to the International Classification of Diseases (ICD-10), confirmed in the medical record, had at least 12 hours at the study site. The following exclusion criteria were adopted: a medical record that makes it impossible to collect data because it was lost, not previously identified with the patient's name or is illegible, among others.

The data obtained by completing the forms were entered in a statistical software. The obtained information was presented in tables and analyzed according to relevant literature, having as descriptive statistics the measures of central tendency and as chi square inferential analysis and normality test of Kolmogorov-Smirnov (KS), accepting as p value result lower than 0, 05 ($p < 0.05$). (9)

The research was authorized by the Research Ethics Committee of the University of Fortaleza (UNIFOR), under the no. 2,066,492. All the ethical and legal precepts of Resolution No. 466/12 of the National Health Council - CNS were respected.

RESULTS

An analysis of 184 medical records of patients hospitalized in neurology units was carried out. The table below shows the sociodemographic profile in which the male predominance was observed, making a total of 153 (83.2%). Regarding age, the prevalence of individuals younger than 40 years old (58.2%) was found, with an average of 38.3 years old (± 16.6). Regarding the race / color in the patients, they were declared, in the majority, brown, resulting in 77.7%. When evaluating where they came from, it was identified that 60.3% were from the interior of the state of Ceará.

When associated with the outcome, the origin was the only variable that did not present statistical significance.

Em relação à tabela 2, quanto ao diagnóstico médico em pacientes neurológicos admitidos nas unidades em

TABLE 1 – Characterization of the sociodemographic profile of the sample. Fortaleza / CE. Brazil, 2018.

Variables	N	%	P value	IC 95%	Md (±DP)
Age					
< 40	107	58,2	**0,01***	35,9 – 40,7	38,3 (±16,6)
≥ 40	77	41,8	**0,00****		
Sex					
Masculino	153	83,2	**0,00***		
Feminino	31	16,8			
Race/color					
Branca	17	9,2	**0,00***		
Parda	143	77,7			
NHR	24	13,1			
Origin					
Capital (Fortaleza – CE)	73	39,7	0,05*		
Interior	111	60,3			
Children					
0	182	98,9	**0,00***		
1	2	1,1			
Destination			**0,00***		
Hospital discharge	162	88,0			
Infirmary	8	4,3			
Death	1	0,5			
Another institution	3	1,6			
NHR	10	5,6			
Total	184	100			

Md: mean; SD: standard deviation; NHR: no record | * Chi-square test ** K-S normality test

Source: research data

estudo, os traumas de cabeça foram a principal representação dos estudos e conforme a Classificação Estatística Internacional de Doenças e Problemas Relacionados à Saúde (CID-10), o traumatismo cranioencefálico (TCE) ou traumatismo cerebral difuso (S06.2), como mais predominante, resultando em 54,8%, seguido do trauma raquimedular (TRM) ou sequelas de traumatismo da medula espinhal (T91.3) com 26,0%.

Regarding the time of hospitalization, it is presented that the majority of the patients were hospitalized for more than 20 days.

It was evidenced that 54.9% presented a Glasgow coma scale as light, referring to 13 to 15 points, but with a Glasgow mean of 12.28, with a standard deviation of approximately 3.9. However, there was still negligence on the part of the nursing professionals who did not register the same (21.7%) in the medical records.

Regarding the pupillary evaluation, another parameter used for neurological evaluation, the study in question obtained a sample of 90 medical records, where the nurses recorded the pupil information. Of these records, there was a predominance of the isochoric pupils (43.5%; n = 80), a normal size condition between the pupils.

As for the urinary system, in relation to the bladder catheter (SVD), this procedure was registered by the nursing professionals in more than half of the medical records (51.1%, n = 94).

Regarding the evaluation of presence of pressure lesion (LPP), the study brings a total of only 27 records containing nurses' records regarding the appearance of these lesions or not, representing 14.7% of the total sample of 184. In addition to these data, it was also verified that of the patients who acquired LPP, only eleven records showed the stage of the lesion.

DISCUSSION

Regarding the age, the presented data resemble other publications regarding the sociodemographic profile of neurological patients. According to the results presented, studies carried out in Fortaleza-CE on the epidemiological profile of patients with TBI and in Ananindeua-PA that evaluated the clinical-epidemiological profile of patients attended at a referral hospital in trauma showed that the age index of patients who were 40 years old or less were 64% and 72.8%, respectively.[10, 11]

The data evidenced in this study referring to the gender with predominance in the masculine sex resemble other studies that show a respective prevalence of 82% by Silva et al.[10], 88% by Viégas et al.[11] and 76,2% by Lima et al.[12] In a survey conducted specifically in the field of neurology, in 2014, it was found that there was also the domain of the male class in their collections, resulting in 58.57%. [13]

It should be noted that the hospital under study is a reference in care for patients who are victims of trauma in the state of Ceará. It is seen that the main admissions in units that attend trauma patients requiring neurological care are mostly male and young adults, accounting for a risk factor for car accidents, physical aggression (violence domestic, firearm and / or white drilling), excessive consumption of alcohol and other drugs. [14, 15]

Data regarding the marital status, level of schooling, occupational situation and monthly income were not recorded in the medical records of the respective Hos-

TABELA 2 – Caracterização dos Diagnósticos, sintomas tempo de internação e destino. Fortaleza/Ce. Brasil, 2018.

Variables	n	%	P value	Md (±DP)
Medical diagnosis				
Traumatic Brain Injury	101	54,8		
Skeletal Trauma	48	26,0		
Others	35	19,2		
Signs and symptoms				
Hemorrhage	7	3,8		
Headache	13	7,1		
Otorrhea	9	4,9		
Fractures	29	15,8		
Convulsion	14	7,6		
Others	61	33,2		
NHR	51	27,6		
Days of Hospitalization				
<20	90	48,9	**0,00***	25,4 (±19,4)
>20	94	51,1		
Complications from Trauma				
Neurological	53	28,8		
Infections	23	12,5		
Others	15	8,2		
NHR	93	50,5		
Total	184	100		

* Qui-square test

Source: research data

TABLE 3 – presents the data subdivided by the systems of the human body, following the cephalopodal anatomy.

Variables	N	%	P value	Md (±DP)
NEUROLOGICAL SYSTEM				
Glasgow Coma Scale				
Mild	101	54,9		
Moderate	19	10,3	**0,00***	12,2 (±3,9)
Critical	25	13,6		
NHR	39	21,2		
Pupil Evaluation				
Reacting to light	69	37,5		
Not reacting to light	6	3,3		
NHR	109	59,2		
Symmetry of Pupils				
Isocoric	80	43,5		
Anisocoria	10	5,4		
NHR	94	51,1		
Ramsay Scale				
5	9	4,9		
6	24	13,0		
CARDIOVASCULAR SYSTEM				
Heart Rate				
Normocardial	105	59,2	**0,02***	85,1 (±19,7)
Tachycardic	23	12,5		
Blood Pressure				
Normal	90	48,9		
High	37	20,1		
Systemic Arterial Hypertension 2	40	21,7		
NHR	17	9,3		
RESPIRATORY SYSTEM				
Respiratory frequency				
Eupnea	120	65,4		
Tachypneic	17	9,1		
Oxygen therapy				
Nasal Catheter	3	1,6		
Venturi Mask	13	7,1		
O2 mask with reservoir	1	0,5		
None	102	55,4		
NHR	65	35,4		
Artificial Airways				
Tracheostomy	3	1,6		

Orotracheal tube	47	25,5
Mechanical ventilation		
Yes	51	28,3
No	133	71,7
GASTRO-INTESTINAL SYSTEM		
Probe		
Nasogastric tube	31	16,8
Nasogastric intubation	9	4,9
Nasogastric tube	4	2,2
None	96	52,2
NHR	44	23,9
URINARY SYSTEM		
Urinary Device		
Spontaneous	56	30,4
Bladder outlet obstruction	4	2,2
Urinary Catheterization D**elay**	94	51,1
NHR	30	16,3
INTEGUMENTARY SYSTEM		
Braden Scale		
Low Risk	7	3,8
Moderate Risk	9	4,9
High Risk	16	8,7
Pressure Injury (LPP)		
Yes	27	14,7
No	34	18,5
NHR	123	66,8
Total	184	100

* Chi square test

Source: research data

pital, which, in consonance with numerous data that do not present records, underestimate possible alterations, making it often difficult to associate thereof.

It is important to emphasize that notifications regarding patient information, even some those that are secondary data for the treatment, will facilitate its recognition by the professional team, helping care for the particularities of each one. In addition to providing support and positive results to improve the patient's clinical condition. [16]

Glasgow Coma Scale (GCS) is one of the parameters used to perform the neurological evaluation of the patients, at the time of admission and throughout the hospital stay. [10, 17]

Therefore, it was evidenced that 54.9% presented mild GCS, referring to 13-15 points, but presenting a Glasgow average of 12,28, with a standard deviation of approximately 3.9. However, there was still negligence on the part of the nursing professionals who did not register the GCS (21.7%) in the medical records. It was verified to the study of Gomes et al. [17] that 58.1% of the nursing care records of 1,960 occurrences attended by the Emergency Service of Emergency Service of Rio Grande do Norte (SAMU 192 RN) represented mild GCS, in addition, the same author, reported that in 39% of these records, the nursing professional did not record the data.

Regarding the pupillary evaluation, another parameter used for neurological evaluation, the study in question obtained a sample of ninety (90) medical records, where the nurses recorded the pupil information. Of these records, predominance of the isochoric pupils (43.5%; n = 80), a normal size condition between the pupils. A result of this study was obtained from a sample of 113 patients, 87 (77%) presented isochromatic pupils, while only 16 (14.2%) had the anisocortical pupils. [18]

Regarding the use of artificial airway and the Ramsay sedation scale, based on what was presented by Barboza, Silva [19], who evaluated the profile of patients hospitalized in neurology units, the indices presented in the study were corroborative. However, there is a need for studies that address these characteristics, since the literature is scarce.

Regarding the urinary system, in relation to the bladder catheter (SVD), this procedure was registered by the nursing professionals in more than half of the medical records (51.1%; n = 94), evidencing the predominance of use in other study publications. Thus, Watanabe et al. [20] and Monagran et al. [21] found that the proportion of patients with bladder catheterization delay was 50.2% and 47.0%, respectively.

Regarding the integumentary system, we observed a low index of registrations by the nursing team in the neurology units of the referred hospital, especially regarding the use of the Braden Scale (EB). This scale is a parameter used to evaluate the patient's risk of developing pressure injury (LPP), assisting nurses when deciding on preventive measures to be performed according to the need and risk of each patient. The scale includes six parameters: sensory perception, humidity, mobility and activity, nutrition, friction and shear; where the patient

can be classified as absent risk, low risk, moderate risk, high risk, or very high risk to develop some type of LPP during hospitalization period. [22-24]

CONCLUSION

Faced with the findings of the study, in the sociodemographic and clinical profile, it was observed that the most prevalent types of diagnoses for neurological patients were Cranioencephalic Trauma (TCE), being the most prevalent in the sample, with a predominance of males, with an average of 38.3 years old, from the interior of Ceará. It was also observed that in the final outcome there was a prevalence of hospital discharge or infirmary, demonstrating an excellent care given to these patients.

During the execution of this study, some limitations were identified that will be exposed: the occurrence of the absence of specific topics for the studies; the underreporting of several variables; the difficulty of access to medical records, which, because they were not yet computerized, generated a lot of work in the collection.

In this context, the importance of the technologies to acquire all the information about the patient and, from their individualities, to carry out the necessary interventions for their care stands out. Nursing professionals stand out in this situation by being able to put into practice the systematization of nursing care (SNC), in virtue of systematizing all stages of patient care, knowledge of their profile and nursing interventions to be directed towards the same. Making SNC a key technology for compiling patient clinical data.

REFERENCES

1. Magalhães ALG, Souza LC, Faleiro RM, Teixeira AL, Miranda AS. Epidemiology of traumatic brain injury in Brazil. Revista Brasileira de Neurologia. 2016; 53(2): 15-22.
2. Monteiro LF, Frasson MZ, Wrsesinski A, Bardini AVLS, Lin J, Fernandes AF. Characterization of patients with severe cranioencephalic trauma admitted to a tertiary hospital. Arquivo Catarinense de Medicina. 2016; 45(3): 02-16.
3. Grumann ARS, Schoeller SD, Martini AC, Forner S, Baroni GC, Horongozo BD. Characteristics of people with stroke at a state referral center. Rev Fund Care Online. 2017; 9(2): 315-320.
4. Oliveira JG, Damasceno KG, Souza LP, Lima MG. Clinical epidemiological profile and the main nursing diagnosis labels for hospitalized patients with stroke in a large hospital in the southern region of the legal Amazon. Revista Amazônia Science & Health. 2016; 4(3): 3-11.
5. Santos CW, Vancini-Campanharo CR, Lopes MCBT, Okuno MFP, Batista REA. Nurses' knowledge assessment on the Glasgow coma scale in a university hospital. Einstein.2016; 14(2): 213-218.
6. Nogueira LS, Padilha KG, Silva DV, Lança EFC, Oliveira EM, Sousa RMC. Pattern of nursing interventions performed on trauma victims according to the Nursing Activities Score. Revista Escola Enfermagem USP. 2015; 49(2): 29-35.
7. Sallum AM, Sousa RM. Nursing diagnoses in trauma victims in the first six hours after the event. ACTA Paulista Enfermagem. 2012; 25(2): 256-262.
8. Fortaleza - Ceará. Catalog of services of the City of Fortaleza. Instituto Dr. José Frota(IJF). 2018.
9. Hulley SB, Cumming SR, Browner WS, Grady DG, Newman TB. Outlining clinical research: an epidemiological approach. 4. ed. Porto Alegre: Artmed, 2015.
10. Silva JAS, Souza ARS, Aline RF, Cavalcante TMC. Cranioencephalic trauma in the city of Fortaleza. Enfermagem Foco. 2017; 8 (1): 22 – 26.
11. Viégas MLC, Pereira ELR, Targino AA, Furtado VG, Rodrigues DB. Cranioencephalic trauma at a referral hospital in the state of Pará, Brazil: prevalence of victims in terms of gender, age, mechanism of trauma and death. Arquivo Brasileiro Neurocirurgia. 2013; 32(1): 15-8.
12. Freitas, L. S., Lucena, S. K. P., & Costa, I. K. F. Prevalence of complications in people with urinary and intestinal stomies. Revista Enfermagem Atual. 2017; 82 (20): 55-61.
13. Batista AJ, Torres JR, Schwind RTF, Peternella FN, Mendes FV. Epidemiological profile of the neurology sector of the clinical school of physiotherapy of the Faculty Ingá in the year 2013. Revista UNINGÁ. 2014; 17(2): 11-15.
14. Monteiro LF, Frasson MZ, Wrsesinski A, Bardini AVLS, Fernandes AF. Characterization of patients with severe cranioencephalic trauma admitted to a tertiary hospital. Arquivo Catarinense de Medicina. 2016; 45(3): 2-16.
15. Silva AMA, Shama SFM. Epidemiology of trauma in care of the new SAMU Hamburg / RS in the first quarter of 2015. Revista Saúde e Pesquisa. 2017; 10(3): 539-548.
16. Araújo JS, Nascimento HM, Farre AGMC, Brito RO, Santos JPA, Vasconcelos TTS. Nurses' knowledge about adverse events and the challenges for their notification. Cogitare Enfermagem. 2016; 21(4): 01-08.
17. Gomes ATL, Silva MF, Dantas BAS, Miranda JMA, Melo GSM, Dantas RAN. Epidemiological profile of traumatic emergencies assisted by an emergency prehospital emergency service. Enfermería Global. 2016; 16(1): 384-405.
18. Praça WR, Matos MCB, Magro MCS, Hermann PRS. Epidemiological and clinical profile of trauma victims in a hospital in the Federal District, Brazil. Revista Prevenção de Infecção e Saúde. 2017; 3(1): 1-7.
19. Barboza DS, Silva RGM. System of Classification of Patients in a Neurological Intensive Care Unit. Journal Health NPEPS. 2016; 1(2): 197-207.
20. Watanabe EM, Almeida VFA, Ottunes AF, Dessunti EM, Pieri FM, Martins EAP, Kerbauy G. Impact of health care-related infections in trauma patients. Semina: Ciências Biológicas e da Saúde. 2015; 36(1): 89-98.
21. Monaghan SF, Heffernan DS, Thakkar RK, Reinert SE, Machan JT, Connolly MD, Gregg SC, Kozloff MS, Adams CA Jr, Cioffi WG. The Development of a Urinary Tract Infection Is Associated With Increased Mortality in Trauma Patients. The Journal Of Trauma: Injury, Infection, and Critical Care. 2011; 71(6): 1569-1574.
22. Borghard AT, Prado TN, Araújo TM, Rogenski NMB, Bringuente MEO. Evaluation of the pressure ulcers risk scales with critically ill patients: a prospective cohort study. Revista Latino-Americana Enfermagem. 2015; 23(1): 28-35.
23. Roa DZM, Parra DI, Camargo-Figuera FA. Validation and quality indexes of the Braden and Norton scales. Gerokomos. 2017; 28(4): 200-204.
24. Caldini LN, Silva RA, Melo GAA, Pereira FGF, Frota NM, Caetano AJ. Nursing interventions and outcomes for risk of pressure injury in critically ill patients. Revista da Rede de Enfermagem do Nordeste (Online). 2017; 18(5): 598-605.