ORIGINAL ARTICLE

PROFILE OF INTENSIVE CARE PATIENTS IN AN EMERGENCY HOSPITAL*
PERFIL DOS PACIENTES DE TERAPIA INTENSIVA EM UM HOSPITAL DE EMERGÊNCIA
PERFIL DE PACIENTES DE TERAPIA INTENSIVA EN UN HOSPITAL DE EMERGENCIA

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ABSTRACT

Objective: to outline the epidemiological profile of patients admitted to the Intensive Care Unit. **Method:** this is a quantitative, descriptive and cross-sectional study with medical records of 212 patients. Data was analyzed using the Statistical Package for Social Science software package. Mean, standard deviation, Pearson correlation and $p < 0.05$ were considered for statistical significance. Results: it was shown that most patients were men, young people, victims of car accidents, especially motorcycle crashes, diagnosed with traumatic brain injury, staying up to seven days in hospital being transferred to the inpatient unit of the same hospital. **Conclusion:** it is concluded that the characterization of the patients profile allows the implementation of prevention strategies inside and outside the hospital, aiming at the reduction of car accidents and the better direction of care provided in Intensive Care Unit. **Descriptors:** Epidemiology; Nursing Care; Critical Care; Critical Care Nursing; Health Profile; Nursing.

RESUMO

Objetivo: traçar o perfil epidemiológico dos pacientes internados na Unidade de Terapia Intensiva. **Método:** trata-se de um estudo quantitativo, descritivo e transversal, com prontuários de 212 pacientes. Analisaram-se os dados por meio do pacote estatístico *software Statistical Package for Social Science*. Realizaram-se média, desvio-padrão, correlação de Pearson e o valor de $p < 0,05$ foi considerado para significância estatística. **Resultados:** demonstrou-se que a maioria dos pacientes foi composta por homens, jovens, vítimas de acidentes automobilísticos, em especial, as quedas de moto, diagnosticados com traumatismo cranioencefálico, permanecendo até sete dias internados sendo transferidos para a unidade de internação do mesmo hospital. **Conclusão:** conclui-se que a caracterização do perfil dos pacientes possibilita a implementação de estratégias de prevenção dentro e fora do hospital, visando a diminuição dos acidentes automobilísticos e o melhor direcionamento da assistência prestada em Unidade de Terapia Intensiva. **Descritores:** Epidemiologia; Cuidados de Enfermagem; Cuidados Intensivos; Enfermagem em Cuidados Críticos; Perfil de Saúde; Enfermagem.

RESUMEN

Objetivo: describir el perfil epidemiológico de los pacientes ingresados en la Unidad de Cuidados Intensivos. **Método:** este es un estudio cuantitativo, descriptivo y transversal, con registros médicos de 212 pacientes. Los datos se analizaron utilizando el paquete estadístico de *software Statistical Package for Social Science*. La media, la desviación estándar, la correlación de Pearson y $p < 0,05$ se consideraron para la significación estadística. **Resultados:** se demostró que la mayoría de los pacientes eran hombres, jóvenes, víctimas de accidentes automovilísticos, especialmente, las caídas de motocicletas, diagnosticados con lesiones cerebrales traumáticas, que permanecieron hasta siete días en el hospital y fueron trasladados a la unidad de hospitalización del mismo hospital. **Conclusión:** se concluye que la caracterización del perfil del paciente permite la implementación de estrategias de prevención dentro y fuera del hospital, con el objetivo de reducir los accidentes automovilísticos y la mejor dirección de la atención brindada en la Unidad de Cuidados Intensivos. **Descriptores:** Epidemiología; Cuidados de Enfermería; Cuidados Intensivos; Enfermería en Cuidados Críticos; Perfil de Salud; Enfermería.

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INTRODUCTION

Intensive Care Units (ICUs) have emerged to provide continuous care and monitoring to critically ill postoperative patients, however, since the 1940s and 1950s, ICUs also had the purpose of providing intensive care to patients at imminent risk of death in an attempt to save their lives.¹ It is essential that ICUs ensure the patient the right to survival, humanized care, minimum exposure to treatment risks and permanent monitoring of treatment progression to adverse effects.²

It is noteworthy that the goal of care for critically ill patients, who have varying levels of impairment, is to achieve stabilization and improvement of the condition through continuous surveillance and performed by a multiprofessional team.³ In this environment, there are professionals with great knowledge and technical skills to perform procedures, because it is a sector with high technology concentration.⁴

It is noteworthy that, among professionals working in the ICU, nurses are responsible for care planning, providing continuous care to critically ill patients, in a systematic manner, which requires theoretical foundation to apply clinical reasoning and technical skill. It is informed that it is up to this professional to evaluate and monitor the patient, prevent complications, assist family members, manipulate monitoring equipment, and perform the managerial and interdisciplinary activities that the sector requires.⁴⁻⁶

Among the various ways of knowing the patients' needs, research is carried out in order to trace the epidemiological profile, encompassing a set of actions that provide, besides knowledge, the detection of changes in the determining and conditioning factors of the disease. individual or collective health, which is important for recommending and adopting measures for the prevention and control of diseases or grievances.⁷

This justifies the need to characterize the patients admitted to the ICUs, as this makes it possible to provide information to managers and health professionals about the profile of assisted users, allowing the identification of resource needs and the elaboration of strategies. for qualified assistance;⁸ In addition, knowing the profile of the users of the sector in question is the first step to have a better dimension of professionals, meeting the real demand of care.⁹

OBJECTIVE

- To outline the epidemiological profile of patients admitted to the Intensive Care Unit.

METHOD

This is a quantitative, descriptive, cross-sectional study, with variables represented by numerical data, using statistical resources for the

analysis; just to observe, record and describe an event occurred with the population studied; performed at a time interval at a certain point in time.¹⁰

A total of 212 medical records of patients admitted to the Intensive Care Unit of the Dr. Daniel Houly Emergency Hospital were considered from November 2015 to September 2016, and records with incomplete information were excluded. The target institution of this research serves a population of over one million people, benefiting 60 municipalities in the region of Agreste Alagoas, Baixo São Francisco and Sertão. In addition, it is responsible for an annual average of 45,000 visits, specializing in urgent and emergency care, focused on trauma and external causes.¹¹

For data collection, a form was developed, which was applied to each patient's medical records and to the ICU's "entries and exits" book. This form enabled us to collect identification data (gender, age, bed number, diagnosis, initials, cause of trauma, date of admission, place of birth and origin) and clinical data on mechanical ventilation, sedative use, development of pressure ulcers, venous access, diet therapy, probes, among others.

Data was analyzed using the Statistical Package for Social Science (SPSS) software package. Mean, standard deviation, Pearson correlation were performed and the p value <0.05 was considered for statistical significance.

This research was approved by the Ethics Committee of the Federal University of Alagoas, according to Resolution 446/11 of the National Health Council, under opinion number 1.269.781. Please be informed that the Free and Informed Consent Term (FICT) was not used in this research, as it is a retrospective research, with the use of medical records and book of patients' entries and exits; in many cases the patients have died; difficult to locate family members, since they did not regularly attend the hospital and the responsible medical sector; patients have been seen for a long time and the address and phone are no longer the same.

RESULTS

A significant sample of 212 records was obtained, of which 186 (87.7%) were male and 26 (12.3%) female (Table 1). Regarding the age group, there was a predominance of young adults aged 21 to 30 years, constituting 73 (34.5%) cases, followed by 31 to 40 years, with 46 (21.7%) cases, with a mean age 34.78 ± 20.6 years (Table 1).

Table 1. General data on ICU patients at the emergency hospital of Agreste. Arapiraca (AL), Brazil, 2018.

General data			
		n	%
Sex	Male	186	87.7
	Female	26	12.3
	Total	212	100
Age group	0-10 years	8	3.8
	11-20 years	20	9.4
	21-30 years	73	34.5
	31-40 years	46	21.7
	41-50 years	23	10.8
	51-60 years	13	6.1
	61-70 years	15	7.1
	71-80 years	7	3.3
	81-90 years	6	2.8
	91-100 years	1	0.5
Total		212	100

Automobile accidents were the main traumatic causes that led to ICU admission, representing 140 (66.0%) admissions, followed by cases of violence, with 29 (13.7%) occurrences (Table 2); Regarding

the diagnosis, the most prevalent was the traumatic brain injury (TBI), with 121 (57.1%) cases, followed by polytrauma (PLT), with 28 cases (13.2%) (Table 2).

Table 2. Cause of trauma, ICU diagnosis of the emergency hospital of Agreste. Arapiraca (AL), Brazil, 2018.

Cause of trauma and diagnosis			
		n	%
Cause of trauma	Car accident	140	66.0
	Violence cases	29	13.7
	Fall from own height	18	8.5
	Exogenous intoxication	13	6.1
	Others	12	5.7
	Total	212	100
Diagnosis	TCE	121	57.1
	PLT	28	13.2
	Others	23	10.8
	PAF	17	8.0
	Exogenous intoxication	13	6.1
	Abdominal trauma	5	2.4
	TRM	5	2.4
	Total	212	100

Most of the patients, 89 (42.0%), had a period of hospitalization ≤ seven days, followed by a period of eight to 14 days, with 48 (22.6%) of the

total patients. the average days of hospitalization was 9.1 ± 9.4 days (Table 3c).

Table 3. Period of hospitalization and monthly distribution, mean and standard deviation of ICU admissions of the emergency hospital of Agreste. Arapiraca (AL), Brazil, 2018.

Hospitalization period			
		n	%
ICU Hospitalization period	≤ 7 days	105	49.6
	8 to 14 days	64	30.1
	15 to 21 days	25	11.8
	22 to 28 days	10	4.7
	≥ 29 days	8	3.8
Total		212	100

Regarding the variation of the main causes of trauma that led to ICU admission according to age group, it is noticed that car accidents, 50 (38.2%) cases, and violence cases, 13 (45.0%) , mostly occurred with young people 21-30 years, while exogenous poisoning, seven (54.0%) occurred in

the range of 31-40 years; The cases of falls from their own height were predominant among the elderly from 70 years old, with one (5.6%) of 61-70 years old; two (11.0%) aged 71-80 years; four (22.2%) aged 81-90 and one (5.6%) aged 91-100 (Table 4).

Table 4. Variation of cause of trauma according to age group in ICU of Agreste emergency hospital. Arapiraca (AL), Brazil, 2018.

		Cause of trauma							
		Car accident		Cases of violence		Exogenous intoxication		Fall from own height	
		n	%	n	%	n	%	n	%
Age group	0-10	5	3.8	0	0.0	1	7.7	2	11.0
	11-20	13	9.9	5	17.2	1	7.7	0	0.0
	21-30	50	38.2	13	45.0	0	0.0	1	5.6
	31-40	27	20.6	4	13.7	7	54.0	5	28.0
	41-50	15	11.5	3	10.3	1	7.7	1	5.6
	51-60	7	5.3	2	6.9	2	15.2	1	5.6
	61-70	10	7.6	2	6.9	0	0.0	1	5.6
	71-80	3	2.3	0	0.0	0	0.0	2	11.0
	>80	1	0.8	0	0.0	1	7.7	5	27.6
Total		131	100	29	100	13	100	18	100

Regarding the patient's destination variable, 128 (60.4%) were discharged from the ICU and were sent to the inpatient unit of the hospital, 59

(27.8%) died and 24 (11.3%).) were transferred to another hospital (Table 5).

Table 5. Automobile accidents as a cause of trauma in ICU patients admitted to the emergency hospital of Agreste. Arapiraca (AL), Brazil, 2018.

Causes		n	%		
Car accidents	Fall from motorbike	86	40.6		
	Other cause*	71	33.5		
	Colision	38	17.9		
	Run over	13	6.1		
	Rollover	4	1.9		
	Total	212	100.0		
Causes X Sex					
Car accidents		Feminino		Masculino	
		n	%	n	%
	Fall from motorbike	5	19.2	80	43.0
	Other cause*	14	54.0	58	31.2
	Colision	4	15.4	34	18.3
	Run over	2	7.7	11	5.9
	Rollover	1	3.8	3	1.6
	Total	26	100	186	100

DISCUSSION

The severely ill patients studied were shown to be predominantly male (87.7%), resembling other studies in Clinical ICUs;¹²⁻³ in traumatic ICUs;¹⁴⁻⁵ in the clinical-surgical ICU¹⁶ and in three ICUs of the Emergency Hospital, Santa Casa de Misericórdia Hospital and Evangelico Goiano Hospital located in the city of Anápolis (GO), Brazil.¹⁷ However, a different result was found in a study conducted in the ICU of a public hospital in Paranoá, Brasília - DF, which shows female predominance.¹⁸

When comparing the results of trauma ICUs with clinical-surgical ICUs, males have a much higher prevalence in trauma ICUs, with over 70% of cases, whereas in clinical ICUs, the number of men is equal or even smaller than women, with a percentage closer to 50%..

Regarding age, a majority of young adults admitted to the ICU, aged 21 to 30 years (27.4%) and 31 to 40 years (21.7%), with a mean age of 34.78 years, differing from studies performed in clinical and surgical ICUs, which presented average ages ranging from 58.8 to 66.5 years.^{12-3,16}

Compared with trauma ICUs, there are greater similarities in relation to age. One study found a higher incidence in the age group from 15 to 44 years,¹⁴ while in another study they obtained an average of 34.6 years among the studied patients.¹⁵ Thus, it is observed that young men are more representative among trauma victims.

Among the causes of trauma are car accidents (61.8%), which included motorcycle crashes (36.3%), collisions (17.9%), run over (6.1%) and rollovers (1.9%), once again in line with the survey¹⁵ which studied the cases of traumatic brain injury (TBI) in an ICU of the São José de Criciúma Hospital, Santa Catarina, Brazil, and had car and motorcycle accidents (55.9%) as the main causes of admissions of the studied patients.

To explain such information, it is considered that the State of Alagoas (AL), Brazil, had an increase of its vehicle fleet by nine times between 1991 and 2011, having Arapiraca, the city where the study is located. , an average growth of 14% in the five years preceding 2011, higher than the state capital, Maceió;¹⁹ there were 350,000 drivers in 2012 in Alagoas, 78% of whom were men and 22% women.¹⁹

The relationship between motor vehicle accidents and males is also taken into account, since it is found in the literature that men are more exposed to risk factors for this type of accident, such as alcohol consumption and driving vehicles.²⁰ In 2013, for example, it was found that the telephone risk survey and protection system for chronic disease surveillance (VIGITEL) and the National Health Survey (NHS) recorded a proportion of adult individuals driving motorized vehicles. after ingestion of 29.3% and 24.4%, respectively, higher in men, and higher still, when dealing with the age group of 18 to 29 years, whose values were 31.6% in VIGITEL and 24.1% in the NHS.²¹

In addition to car accidents, cases of urban violence (13.7%) stood out, and young adults, aged 21 to 40 years, with more than 40% of cases, also stood out among the victims of urban violence. This result is similar to the VIVA Inquiry survey, promoted in 86 emergency and emergency services within the Unified Health System (UHS), in 2014, located in the Federal District and 24 Brazilian capitals, in which 4,406 cases of violence were registered 50.2% are young people aged 20-39.²²

Although violence predominates among young people, it is not restricted to this public, but is considered a social problem and has numerous individual and collective consequences.²³ It is revealed that, together with accidents, urban violence forms a group called the World Health Organization (WHO) of External Causes, which, in turn, occupy the second place in the mortality profile and the first when it comes to deaths in the age group of five to 49 years.²⁴

Regarding the diagnoses, it is exposed the Traumatic Brain Injury (TBI), which was highlighted in our research with 54.7% of the cases treated at the ICU studied, similar to the study conducted at the Care Complex of the Faculty of Medicine of Marília, by it was shown that in the trauma and external causes group, neurological injuries.²⁵

It is emphasized that, 26.7% of the patients with TBI died and 52.6% went to the inpatient unit of the same hospital, corroborating another study¹⁴ about victims of TBI in intensive care.

It is revealed that 26.7% of the patients died, which is equivalent or even inferior to that observed in other studies.^{12,16-7,25} Mortality rate is used repeatedly as an indicator of quality in ICUs, making it a relevant finding.¹⁶

Speaking of hospitalization time, it was found that the average was 9.1 days, with predominance (42%) of less than seven days, resembling the other studies,¹⁶ with an average length of stay of 10.1 days;¹⁷ average of 13 days in the emergency hospital studied;²⁵ with 8.09 days,¹² with 10.6 days.

The length of stay was correlated with the fate of the patients studied, obtaining a significant relationship with p value: 0.000. It can be observed from this correlation that most ICU deaths occurred with patients who remained for up to seven days (50.8% of total deaths), and the same occurred with ICUs in another study,¹⁶ I obtained an average of seven days of stay for the patients who died, and 58% of them remained from one to four days.

CONCLUSION

It is understood, through this study, that the patients treated at the Intensive Care Unit of the Emergency Unit of the Alagoas Agreste Dr. Daniel Houly are mostly men; young; victims of car accidents, especially motorcycle crashes; diagnosed with head injury (TBI); remaining from zero to seven days in hospital, being discharged and being referred to the same hospital.

It is noteworthy that these data make it possible to plan and organize actions inside and outside the hospital unit, working with patients, families and the community. It is possible, through the integration between hospital and municipal managing body, related to traffic safety, the planning of strategies to combat traffic violence and sensitization of the population, especially the male and young public, regarding the use of alcohol and driving, respecting speed limits, helmet use, among other measures.

It is also pointed out the need for the receiving team of patients coming from this ICU to be aware of this information and to be trained for this reception, continuing the care provided efficiently, enabling better recovery of patients.

It is expected that this research contributes not only to the practice of the nursing team, but to all teams that make up the healthcare body inside and outside the hospital, since these data can and should be known to all professionals who make up the ICU team, other sectors of the hospital and the Municipal Health Secretariat, guiding effective actions to combat traffic accidents, reduce alcohol consumption while driving vehicles, prevent falls from their own height in the home environment, among others, thus allowing comprehensive and efficient patient care.

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