

CHARACTERIZATION OF THE HOSPITALIZATIONS OF ADOLESCENTS IN INTENSIVE CARE UNITS

CARACTERIZAÇÃO DAS INTERNAÇÕES DE ADOLESCENTES EM UNIDADES DE TERAPIA INTENSIVA

CARACTERIZACIÓN DE LAS INTERNACIONES DE ADOLESCENTES EN UNIDADES DE TERAPIA INTENSIVA

Gabriela de Souza Bandeira¹, Abigail de Paulo Andrade², José Jeová Mourão Netto³, Késia Marques Moraes⁴, Sara Cordeiro Eloia⁵

ABSTRACT

Objective: to characterize the hospitalizations of adolescents in Intensive Care Units. **Methods:** Documentary research, quantitative approach retrospective. The data were collected from 83 medicals records of adolescents between 10 and 19 years of age, hospitalized in the Intensive Care Units, adult and pediatric, of two Reference Hospitals in Ceará between July 2013 and June 2014. Data were tabulated and processed in the Epi Info program and analyzed in a descriptive way. **Results:** 62.7% of hospitalizations occurred in Hospital 1, compared to 37.3 in Hospital 2, the majority of male patients (63.9%) aged between 10 and 14 years (57.8%). Among the main diagnoses and hospitalization causes, external causes accounted for 46.9% of total admissions. Contacted it is also that 26.5% of hospitalized patients died. **Conclusion:** Adolescents are occupying intensive care beds at ever smaller ages, so that significant part has evolved with death. The main causes of hospitalization were traffic accidents, suicide and assaults, exposing a serious public health problem.

Descriptors: Adolescents; Adolescent, Hospitalized; Intensive Care Units.

RESUMO

Objetivo: caracterizar as internações de adolescentes em Unidades de Terapia Intensiva. **Métodos:** pesquisa documental, retrospectiva de abordagem quantitativa. Os dados foram coletados de 83 prontuários de adolescentes entre 10 e 19 anos, internados nas Unidades de Terapia Intensiva, adulto e pediátrica, de dois Hospitais de Referência, no Ceará, entre julho de 2013 e junho de 2014. Os dados foram tabulados e processados no programa Epi Info e analisados de forma descritiva. **Resultados:** 62,7% das internações ocorreram no Hospital 1 e 37,3 no Hospital 2, sendo a maioria do sexo masculino (63,9%) com idades entre 10 e 14 anos (57,8%). As causas externas foram responsáveis por 46,9% do total de internações. Constatou-se, ainda, que 26,5% dos pacientes internados evoluíram para óbito. **Conclusão:** adolescentes estão ocupando leitos de terapia intensiva em idades cada vez menores. As principais causas de

¹ Enfermeira. Especialista em Terapia Intensiva. Escola de Saúde Pública do Ceará.

² Enfermeira. Mestre em Saúde Pública. Coordenadora da Especialização em Terapia Intensiva da Escola de Saúde Pública do Ceará.

³ Enfermeiro. Doutorando em Cuidados Clínicos em Enfermagem e Saúde pela Universidade Estadual do Ceará. Hospital Regional Norte. E-mail: jeovamourao@yahoo.com.br.

⁴ Enfermeira. Mestre em saúde Pública. Docente das Faculdades INTA.

⁵ Enfermeira. Doutoranda em Enfermagem pela Universidade Federal do Ceará.

hospitalização foram acidentes de trânsito, suicídio e agressões, expondo um grave problema de saúde pública.

Descritores: Adolescente; Adolescente Hospitalizado; Unidades de Terapia Intensiva.

RESUMEN

Objetivo: caracterizar las internaciones de adolescentes en Unidades de Terapia Intensiva. **Métodos:** investigación documental, retrospectiva de abordaje cuantitativo. Los datos fueron recolectados de 83 prontuarios de adolescentes entre 10 y 19 años, internados en las Unidades de Terapia Intensiva, adulto y pediátrica, de dos Hospitales de Referencia, en Ceará, entre julio de 2013 y junio de 2014. Los datos fueron tabulados y procesados en el. Epi Info y analizados de forma descriptiva. **Resultados:** El 62,7% de las internaciones ocurrieron en el Hospital 1, contra 37,3 del Hospital 2, siendo la mayoría del sexo masculino (63,9%) con edades entre 10 y 14 años (57,8%). Las causas externas fueron responsables del 46,9% del total de internaciones. Se contó, además, que el 26,5% de los pacientes internados evolucionaron a muerte. **Conclusión:** adolescentes están ocupando lechos de terapia intensiva en edades cada vez menores, de forma que una parte importante evolucionó con muerte. Las principales causas de internamiento fueron accidentes de tránsito, suicidio y agresiones, exponiendo un grave problema de salud pública.

Descriptor: Adolescentes; Adolescente Hospitalizado; Unidades de Terapia Intensiva.

INTRODUCTION

Adolescence is understood as a biological process involving organic experiences, in which the cognitive development and the structuring of personality are evident, characteristic of people aged 10 to 19 years. It comprises a transitional stage between childhood and adulthood, contemplating a dynamic process of evolution of life, started from birth, marked by social, sexual, ideological and vocational changes, from a body transformation that forces the individual to adult condition.^{1,2,3}

In the context of hospital care, hospitalization of adolescents, especially in Intensive Care Units (ICU), generates concern because of the fact of health

impairment and quality of life at the earliest possible stage of the development. In addition, there is the unpreparedness of services to meet the specific needs of this population.⁴

The ICU is a highly complex sector, feature verified by the peculiarity of the patients seen, that quite often need several invasive and complex diagnostic and therapeutic interventions. In addition to the technological apparatus linked to care, ICU care must have specialized human resources, which in an interdisciplinary way, be able to apply the knowledge in a safe manner with a view to better recovery of the seriously ill clientele.⁵

In 2014, of the 11,298,365 hospitalizations registered in Brazil,

1,200,466 (10.6%) were of adolescents. Data recorded in Ceará showed that from the total of 477,655 hospitalizations, 54,486 (11.5%) were of people aged 10 to 19 years old.⁶

External causes are among the main factors of morbidity and mortality among children and adolescents in Brazil and worldwide, standing out the automobile accidents, falls, exogenous poisoning, burns and sexual abuses.⁷ Most clients/patients hospitalized due to external causes are between 15 and 19 years (37%), are male (67%) and were victims of car accidents (83%).⁸

To characterize hospitalizations of adolescents in ICU is relevant to the understanding of the distribution, the conditions and determinants related to health problems in this age group.

The study aimed to characterize the admissions of adolescents in ICUs. This information can subsidize hospitals for the formulation of new strategies to ensure improved quality of care to adolescents who require intensive care.

METHOD

It was developed a retrospective, documentary research, quantitative approach. In this regard, a survey was carried out of the records of all

clients/patients aged between 10 and 19 years, hospitalized in the pediatric and adult ICU, of two reference hospitals of Ceará state North region, during the period from July 2013 to June 2014. Both hospitals are reference to 55 municipalities in Ceará, providing a total of 49 ICU beds, between adult and pediatrics. They were encoded in Hospital 1 and Hospital 2. Each hospital has one ICU for adults and one for pediatrics.

The study included the records of people that suited the following criteria: aged 10 to 19, hospitalized in adult or pediatrics ICU, in the period from July 2013 to June 2014. The records containing incomplete and/or insufficient information were excluded.

Altogether 120 records were requested for analysis, but 37 of them were not found by both institutions or did not have complete information, not being used for the study. Therefore, 83 records have been examined.

Data collection occurred through a script formulated based on the records of the institutions. The variables contemplated: age, gender, origin, ICU care priority, causes of hospitalization, length of stay in ICU, the evolution of clinical picture and basic causes of death, according to the ICD-10.

Data were tabulated and processed using Epi Info version 3.5.1. A descriptive analysis of the variables of the study was carried out. The results were presented in tables.

This study followed the parameters of Resolution No. 466/12 of the National Health Council/Ministry of Health, which addresses researches involving human beings, submitted to and approved by the Research Ethics Committee of the School of Public Health of Ceará, under the number 41054915.8.0000.5037, on February 6, 2015.

analysis of 83 records, with hospitalizations between July 2013 and June 2014. Thus, 62.7% of the hospitalizations occurred in Hospital 1, being the majority of the clients/patients male (63.9%) and aged 10 to 14 years (57.8%) (Table 1).

Among the main diagnoses, the external causes were responsible for 46.9% of the total admissions of adolescents. Regarding the type of ICU, admissions focused on the pediatric ICU (57.8%). Regarding outcomes, it was observed that 26.5% of the adolescents eventually died.

RESULTS

The study characterized the admissions of adolescents in ICU from the

Table 1 - Distribution of the number of adolescents' admissions in ICU, according to source, gender, age, diagnosis, external cause, type of ICU outcome. Sobral, July 2013 to June 2014.

Source of information	n	%
Hospital 1	52	62.7
Hospital 2	31	37.3
Sex		
Male	53	63.9
Female	30	36.1
Age group		
10-14	48	57.8
15-19	35	42.2
Diagnosis		
External causes	39	46.9
Diseases of the nervous System.	11	13.2
Infection and parasitic Diseases.	9	10.8
Neoplasms	8	9.6
Respiratory infection	7	8.4
Blood and hematopoietic organs	3	3.6
Others	6	7.2
Outcome		

Transfer	55	66.3
Death	22	26.5
Discharge	3	3.6

Source: study data.

External causes accounted for almost half (47%) of the ICU hospitalizations. Among the external causes, there were the automobile accidents (20.5%), suicide (12%), and 100% of the cases ranging from 15-19 years, and by assaults (9.6%).

Regarding the diagnoses established according to age, it was observed that external causes occupied the first place among the causes of hospitalizations, being highlighted the age group between 15 to 19 as the most affected (71%) in comparison to the age group 10 to 14 (29%).

Table 2-Distribution of diagnosis by age group. Sobral, July/2013 to June/2014

Diagnosis	10-14 years n%	15-19 n%	Total n%
External causes	14 29.2%	25 71.4%	39 47%
Nervous system disorders	8 16.7%	3 8.6%	11 13.3%
Infection and parasitic Diseases	6 12.5%	3 8.6%	9 11%
Neoplasms	6 12.5%	2 5.7%	8 9.6%
Respiratory infection	5 10.4%	2 5.7%	7 8.4%
Blood and hematopoietic organs	3 6.3%	0 0.0%	3 3.6%
Others	6 12.5%	0 0.0%	6 7.2%
Total	48 100.0%	35 100.0%	83 100.0%

Source: study data.

Automobile accidents occupied the first place among the main external causes that provoked adolescents hospitalization in

ICU, accounting for 20.5% of the total admissions.

Table 3 -Distribution of external causes according to age. Sobral, July 2013 to June 2014.

External causes	10-14 years n%	15-19 n%	Total n%
Car accident	7 50.0%	10 41.6%	17 20.5%
Suicide	0 0.0%	10 41.6%	10 12.0%
Assault	4 28.5%	4 16.6%	8 9.6%
Fall	3 21.4%	0 0.0%	3 3.6%
Total	14 100.0%	24 100.0%	38 100.0%

Source: study data.

DISCUSSION

Male (63.9%) stands out on the female (37.1%) in the number of admissions to the ICU analyzed. Other studies also refer the higher evidence of male adolescent related to women in number of admissions to pediatric ICUs.⁹ In a study that analyzed the profile of adolescents admitted to the ICU in Brazil, it is described that in 2008 while the rate of ICU hospitalization in female adolescents corresponded to 0.8, the male was 2.9, therefore, three times higher.⁴ However, another study in Parana, which analyzed the main causes of hospitalization of adolescents (age group 10-19) in ICU, found that there is a predominance of requests of ICU beds for female, with 68%.¹⁰ Although, what is observed from the studies is that the male admissions are related to accidents and violence and the female ones are related to pregnancy.

Accidents and violence represent a set of damages to health, including as accidental causes those due to traffic, falls, work, drowning, poisoning, among other types of accidents, and as intentional causes, assaults and self-inflicted injuries. This set of events is denominated external causes.¹¹

Traffic accidents are the leading cause of adolescents' deaths worldwide, followed by HIV/AIDS and suicide.¹² Thus, traffic accidents have set a serious public health problem, presenting itself as a challenge and demanding bolder public policy design in order to better deal with the issue.

Depression is the main cause of disability among adolescents and suicide ranks third among the causes of death.¹² In an epidemiological analysis study of the suicide victims of a reference hospital in Ceará, it was found that the age group of 12-21 was the second most affected (40%), only behind the group 21-41 (45%).¹³ Suicide has been presented as a serious health problem throughout the world¹⁴ and involve cultural aspects, myths, taboos, stigmas and biopsychosocial factors little discussed in the literature, despite the progression of suicide rates nationwide. This gap is worrying, since adolescents and young adults are the ones who try suicide more.¹⁵

A study conducted in a pediatric ICU found that 10.8% of hospitalized adolescents died, a result lower than the one shown in this study. Such a phenomenon reveals the severity of the patients investigated.

Of the hospitalizations due to external causes, 71.4% include the range of 15-19 years. These figures differ from that found in another study that analyzed the attendance profile by external causes in adolescents in a hospital, in which it was found that the percent of the adolescents in the age group of 15-19 (51.5%) and 10-14 (48.5%) were very close.¹⁷

The main causes of death of Brazilian children and adolescents aged 5-19 are accidents and violence, which is consistent with the results of this study. These are the two most exposed and vulnerable groups to suffer violations of their rights, affecting their emotional, physical and mental health. In major Brazilian cities, in ten children or adolescents who die, about seven lose their lives by accident or some violent cause.¹⁸

Brazil has failed to prevent the alarming growth of adolescent murders. The Child and Adolescent Statute (Estatuto da Criança e do Adolescente) – ECA states that they should have guaranteed their right to life, reflecting what determines the Federal Constitution. However, after the approval of this law, the number of Brazilians homicides of up to 19 years old doubled. From 1990 to 2013 it increased from 5 000 to 10 500 cases per year.¹⁹

Adolescence is an important time to lay the foundations for good health in adulthood. Many behaviors and conditions related to health begin or are reinforced during this period of life.¹⁹

Probably, strategies that integrate health and education professionals, with a view to promoting health in the school environment may contribute to the themes to be addressed more broadly way.²⁰

CONCLUSION

In the scenario studied, there was a predominance of adolescents between 10 and 14 years, male, mostly victims of traffic accidents, suicide or assault.

The characterization of adolescent admissions in intensive care units is an important action to increase the visibility of this issue, still little explored.

Adolescents are taking ICU beds at increasingly early ages and more and more from traffic accidents and as a result of violence, evolving for death in a significant portion of the occasions. Such phenomenon deserves more attention from public policy inductors, society and health services in order to create coping strategies.

Researches conducted with groups of adolescents become increasingly necessary, while literature is still scarce, the few existing studies on adolescent admissions are restricted to local surveys or focus on specific disease or injury. Therefore, there is a need for further researches in the area that can explore more widely and deeply the subject.

Among the few studies, it was identified a difficulty concerning the scenario of the research, as those that occurred in adult ICU only addressed the adolescents aged 14-19 years; whether the study was in the pediatric ICU setting, participants were only adolescents ranging from 10-14 years, what limits the generalization of a profile, given that both age groups assume different characteristics and behaviors. As a limitation of this study, there is the short period of time used, what makes generalizations impossible, but indicates the need for more comprehensive studies of adolescents about adolescents in the context of intensive care.

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