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CLINICAL AND EPIDEMIOLOGICAL PROFILES OF ELDERLY PEOPLE WITH HEART FAILURE

PERFIS CLÍNICO E EPIDEMIOLÓGICO DE IDOSOS COM INSUFICIÊNCIA CARDÍACA PERFILES CLÍNICOS Y EPIDEMIOLÓGICOS DE IDOSOS CON INSUFICIENCIA CARDÍACA

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ABSTRACT

Objective: to identify the clinical and epidemiological profile of the elderly with heart failure in the Intensive Care Unit. **Method:** this is a quantitative, retrospective study, with the data collection in the medical records of 53 elderly people. The data were tabulated and processed using SPSS software version 21.0, for Windows, by means of descriptive statistics in tables and figures. **Results:** male predominance (54.7%), mean age 72 years, race / brown color (54.7%) and low schooling (32.1%) were found. The etiology for HF that most occurred was congestive (56.6%) and reduced ejection fraction (37.7%); the hospitalization time in the ICU of the majority was up to seven days (34.7%) and 60.4% were discharged from the sector, although 35.8% died. **Conclusion:** it is concluded that heart failure is a comorbidity that favors hospitalization, especially in the elderly, and recognizing the clinical and epidemiological profile of the assisted clientele may favor the restructuring of the existing care models, together with the elderly group, in the reach of the disease control. **Descriptors:** Heart Failure; Aged; Critical Care; Health of the Elderly; Nursing; Health Care (Public Health).

RESUMO

Objetivo: identificar os perfis clínico e epidemiológico dos idosos com insuficiência cardíaca na Unidade de Terapia Intensiva. **Método:** trata-se de estudo quantitativo, retrospectivo, com a coleta de dados em prontuário de 53 idosos. Tabularam-se e processaram-se os dados por meio do *software* SPSS versão 21.0, *for Windows*, por meio de estatística descritiva em tabelas e figuras. **Resultados:** revela-se a predominância do sexo masculino (54,7%), com idade média 72 anos, raça/cor parda (54,7%) e baixa escolaridade (32,1%). Descreve-se que a etiologia para a IC que mais ocorreu foi a congestiva (56,6%) e fração de ejeção reduzida (37,7%); o tempo de hospitalização na UTI da maioria foi de até sete dias (34,7%) e 60,4% tiveram alta do setor, apesar de 35,8% terem evoluído a óbito. **Conclusão:** conclui-se que a insuficiência cardíaca é uma comorbidade que favorece a hospitalização, sobretudo, em idosos, e reconhecer os perfis clínico e epidemiológico da clientela assistida pode favorecer a reestruturação dos modelos assistenciais vigentes, junto ao grupo de idosos, no alcance do controle da doença. **Descritores:** Insuficiência Cardíaca; Idoso; Cuidados Críticos; Saúde do Idoso; Enfermagem; Atenção à Saúde.

RESUMEN

Objetivo: identificar los perfiles clínico y epidemiológico de los ancianos con insuficiencia cardíaca en la Unidad de Terapia Intensiva. **Método:** se trata de estudio cuantitativo, retrospectivo, con la recolección de datos en prontuario de 53 ancianos. Se tabularon y procesaron los datos a través del *software* SPSS versión 21.0, para Windows, por medio de estadística descriptiva en tablas y figuras. **Resultados:** se revela la predominancia del sexo masculino (54,7%), con edad promedio 72 años, raza / color parda (54,7%) y baja escolaridad (32,1%). Se describe que la etiología para la IC que más ocurrió fue la congestiva (56,6%) y fracción de eyección reducida (37,7%); el tiempo de hospitalización en la UTI de la mayoría fue de hasta siete días (34,7%) y el 60,4% tuvo alta del sector, aunque el 35,8% había evolucionado la muerte. **Conclusión:** se concluye que la insuficiencia cardíaca es una comorbilidad que favorece la hospitalización, sobre todo en ancianos, y reconocer los perfiles clínico y epidemiológico de la clientela asistida puede favorecer la reestructuración de los modelos asistenciales vigentes, junto al grupo de ancianos, en el alcance del control de la enfermedad. **Descritores:** Insuficiencia Cardíaca; Anciano; Cuidados Críticos; Salud del Anciano; Enfermería; Atención a la Salud.

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INTRODUCTION

Heart failure (HF) is considered to be a public health problem responsible for increasing hospitalization rates and mortality worldwide, especially among the elderly population. It is a chronic and progressive condition in which the heart muscle can not pump blood to meet the needs of the body and the heart can not keep up with its workload.¹

It is noted that the increasing prevalence of HF has been associated with a progressive increase in life expectancy, considering that the occurrence is directly related to age and to the comorbidities that are more common in aging. This pathology is considered the second cause of hospitalization among the elderly.²

It is known that HF has atherosclerosis, acute myocardial infarction, arterial hypertension, valvular diseases, obesity, arrhythmias, cardiomyopathies, diabetes mellitus, anemia, smoking and neoplasia as risk factors and causes.¹ Multiple risk factors are presented simultaneously and these precede the onset of HF, which makes it difficult to select the underlying cause and define specific health planning actions in order to reduce their incidence.³

It is revealed that the progression of HF usually occurs rapidly in a series of steps that evolve until the time of decompensation.⁴ There are the following types of HF: left or right HF, congestive heart failure, with functional classification ranging from I to IV, according to the clinical condition, according to the New York Heart Association (NYHA).¹

According to DATASUS data, there are around two million patients with HF in Brazil, with 240,000 cases diagnosed per year. It is reported that HF is the most frequent cause of hospitalization for cardiovascular disease, being more found in the age group above 60 years, where more than 2/3 (69.8%) of hospitalizations were performed and there is a higher mortality rate in the elderly.⁵ It is evidenced that, in Bahia, there are about ten thousand cases of patients with HF, being a highlight for the elderly in hospitalizations for cardiovascular diseases.⁶

It is worth noting that the elderly with HF hospitalized in the intensive care unit go through phases of stable and other acute decompensation, which characterizes the reason for the hospitalization, since they are carriers of other pathologies, such as hypertension, chagas disease and AML, associated with the age factor, increase mortality.⁷

It is understood that the high number of hospitalizations, the high cost at each hospital admission and the incapacity that the disease generates to the patient make the HF associate with serious social and economic consequences, which favors the reduction of the quality of life, increased morbidity and mortality and treatment and hospitalization costs. It is then important to know the profile of the elderly population to propose strategies that favor the prevention and control of HF.

OBJECTIVE

- To identify the clinical and epidemiological profile of the elderly with heart failure in the Intensive Care Unit.

METHOD

This is a quantitative, retrospective study, carried out by means of physical data collection, from February to June 2016, at the Intensive Care Unit (ICU) of a philanthropic hospital in the city of Salvador - Bahia.

The inclusion criteria were analyzed, which were patients hospitalized in this unit, from January to December 2015, who presented a diagnosis of heart failure, in any functional class in the medical evolution (ICD 10: I50), of both sexes, older than 60 years and who had a period equal to or greater than 24 hours of ICU hospitalization. Incomplete medical records, with more than three missing variables, were excluded from patients with a diagnosis to be clarified and not found in the file or billing.

Resolution 466/2012 on research involving human data was respected, and this study was approved by the Research Ethics Committee of the Bahian School of Medicine and Public Health under protocol N. 1,396,619.

The medical records were selected by hospital unit census, and initially included 392 medical records of patients who had been hospitalized in the period. The medical files were then requested to the Medical File Service (MFS).

Of the 392 patients, 56 patients had a diagnosis of HF, three of which were excluded due to hospitalization time of less than 24 hours, and the final sample consisted of 53 medical records. It is noteworthy that, of the 392 medical records, 23 were not found.

Data was collected through an instrument containing questions on sociodemographic data, etiology of HF, diagnosis of HF, risk factors for HF and clinical evolution of the elderly in the unit: length of hospital stay, type of hospitalization, and echocardiogram

with percentage of left ventricular ejection fraction.

The collected data were tabulated and processed using SPSS (Statistical Package for Social Science), version 21.0, for Windows, using descriptive statistics. Variables were

Sociodemographic characterization of the elderly

presented descriptively in tables containing absolute (n) and relative (%) frequencies and graphs.

RESULTS

Table 1. Sociodemographic characteristics of elderly patients with heart failure in the Intensive Care Unit. Salvador (BA), Brazil , 2016.

Sociodemographic characteristics	n	%
Sex		
Female	24	45.3
Male	29	54.7
Age		
60-64	10	18.9
65-69	15	28.3
70-79	19	35.8
80 or more	09	17.0
Race/Colour		
Black	19	35.8
White	03	5.7
Brown	29	54.7
Information not found	02	3.8
Education		
Illiterate	10	18.9
Incomplete elementary school	17	32.1
Complete elementary school	09	17.0
Incomplete highschool	03	5.7
Information not found	14	26.4

Age-related risk factors

There were two or more risk factors associated with HF in the elderly (94.33%) (Figure 1).

Figure 1. Age-related risk factors in elderly patients with heart failure in the Intensive Care Unit. Salvador (BA), 2016.

Causes of admission

It is emphasized that the elderly had more than one cause for admission to intensive care (Figure 2).

Figure 2. Causes of admission of elderly patients with heart failure in intensive care. Salvador (BA), Brazil, 2016.

Clinical features of HF

Table 2. Characteristics of heart failure in the elderly in an Intensive Care Unit. Salvador (BA), Brazil, 2016.

Clinical features	n	%
HF Classification		
Congestive HF	30	56,6
HF from Chagas Disease	04	7,5
Ischemic HF	03	5,7
Not specified HF	14	28,3
Information not found	01	1,9
Criteria for diagnosis		
Frahming Criteria	03	5,7
NYHA	26	49,1
Information not found	24	45,3
Preserved LVEF*		
Yes	12	22,6
No	20	37,7
Information not found	21	39,6
(Left Ventricular Ejection Fraction) LVEF*		

Clinical evolution in the ICU

Table 3. Clinical evolution of elderly patients with heart failure in an Intensive Care Unit. Salvador (BA), Brazil, 2016.

Clinical evolution	n	%
Type of hospitalization		
Clinical	40	75.5
Surgical	11	20.8
Information not found	02	3.8
Hospitalization time		
24 hours	12	22.6
1 to 7 days	18	34.0
8 to 30 days	15	28.3
More than 30 days	06	11.3
Information not found	02	3.8
Outcome		
Death	19	35.8
Internal transfer	32	60.4
External transfer	01	1.9
Information not found	01	1.9

DISCUSSION

It is known that HF is one of the most common causes for hospitalization among individuals 65 years of age or older,¹ with age being a risk factor for HF, and the sample had the risk factor installed. This factor is associated with cardiovascular risk by the frequency of subclinical comorbidities and diseases together with functional and anatomical alterations that act by modifying the cardiovascular structure, facilitating the performance of pathophysiological mechanisms of diseases in the elderly.⁸

It was found that the mean age of this study (72.38±8.55) corroborates the Canadian clinical trial on the clinical characteristics and in-hospital outcomes of patients with HF with a mean of 72 years⁹ and with the multicenter EAHFE (Epidemiology Acute Heart Failure in Emergency), who investigated the risk factors associated with hospitalization time in HF patients, and the sample had a mean age of 79.5 (± 9.9) years.¹⁰

It was identified that of the 53 elderly, 54.7% were male, and the male sex is a risk factor for heart failure,¹¹ because men are more exposed to chronic diseases when compared to women, such as hypertension arterial. It is pointed out, in the literature, a higher prevalence of HF in men when compared to women.¹²

It was noted, with respect to race/color, that 54.7% of the sample was brown. It has been shown, in IBGE data, that in the Northeast region the majority of the population declares itself as black or brown (72.5%), and especially in Bahia, the participation of blacks or pardos in the population is significant (79.3%).¹³

Low schooling was identified among the elderly. It is presented, in IBGE data, that the percentage distribution of people aged 60 years or more in Brazil has one to eight years of studies, corroborating the current study.¹³ It has been evidenced in the literature that low levels of schooling are contributing factors of worse outcomes in heart disease patients.¹⁴

The prevalence in this study of hypertensive patients (66.9%) was demonstrated in relation to age-related risk factors for HF, corroborating other studies in which the majority of patients with HF had high blood pressure.¹⁵⁻⁶ It is noticed that the incidence of HF is higher in individuals with advanced age and high blood pressure levels.¹²

It was found in a cohort study carried out in university hospitals in Havana, Cuba, that

Diabetes Mellitus (DM) is associated with HF in individuals with mean age of 75 years.¹⁷ It was found in this study that 33.9% of the elderly with HF had diagnoses of confirmed DM. It should be noted that diabetes mellitus and arterial hypertension are also factors that increase mortality in patients with HF.³

It is known, with regard to smoking, that smoking increases the risk of cardiovascular diseases, being an aggravating factor for HF.³ In this study, the prevalence of smoking was 28.3%, which was lower than that found in another study,¹⁵ in a reference hospital in the region of Minas Gerais, with a prevalence of smoking in 48.1%.

Anemia is considered a marker of severity for HF.³ Anemia was identified in 22.64% of the elderly with HF, a similar result to the study carried out in the city of Salvador, with prevalence of 26.4%. It was evidenced in a review study that hospitalized and institutionalized elderly individuals presented high prevalences of anemia and increased risk of mortality.¹⁸

It was demonstrated, in relation to the cause for elderly admission to intensive care in this study, changes in the cardiac and respiratory systems were corroborated by a cohort study carried out with elderly patients in intensive therapy in the city of Porto Alegre, Brazil, with prevalence of admission due to cardiorespiratory system.⁴ In another retrospective cohort performed at the São Paulo ICU, a higher prevalence of admission to intensive care for cardiovascular diseases was identified.¹⁹

It is highlighted that the definition of the etiology of HF is a fundamental step for the evaluation of the therapeutic treatment, besides providing strategies to determine the management that can aid in the prognosis.²⁰ It should be noted that in this study 56.6% of the elderly had congestive heart failure as a diagnosis, and this pathology may appear acutely, but it usually develops gradually, sometimes for years. The possibility of adaptations of the heart is generated, being a chronic condition, which can allow a prolonged life, sometimes with some limitation to its carriers, if treated correctly.²² It becomes the correct diagnosis of HF that is fundamental for the therapeutic and prognostic.¹

It is pointed out that, for the functional classification, the New York Heart Association - NYHA classifications (49.1%) were adopted and recorded in the records of the elderly in this study. Studies have shown that a good correlation of the aforementioned classification with prognosis and quality of life

is found,¹ however, in 45.3% of the medical records investigated, classification information was absent, which may have impaired treatment of the HF.¹²

It is worth mentioning that the echocardiogram is the first choice, and it is useful both in diagnostic confirmation and in the definition of the etiology, and HF with left ventricular ejection fraction (LVEF) is more common in men.³ In this study, 37.7% of the elderly had a reduced ejection fraction, but in 39% of the medical records no references were found for LVEF, and this may have impaired the diagnosis and prognosis of HF.

It is understood that, although the diagnosis of HF is based on history and physical examination, complementary tests, such as echocardiography, are important because, in addition to confirming the diagnosis, they provide data on the degree of cardiac remodeling, the presence of systolic and / or diastolic dysfunction, the etiology, the cause of decompensation, the existence of comorbidities and the risk stratification.²⁴

It is stated that the elderly have a lower degree of dilation of the ventricular chambers, less systolic dysfunction, greater intensity of diastolic dysfunction and higher levels of catecholamines and natriuretic atrial factor²⁵ and, therefore, require a differentiated and intensive care when thinking about function cardiovascular.

It was verified that the elderly remained in the ICU for one to seven days, and an EAHFE study, carried out in Spain, presented similar data, with an average of seven days.¹⁰ On the other hand, it was observed in the ICU of the Brazilian capital, the hospitalization time greater than two weeks.²⁶ It is indicated, in DATASUS data, that individuals over 60 years of HF hospitalized in the capital city of Salvador have an average stay of 13.4 days.⁶ Thus, it can be considered that the elderly in this study have a better prognosis when compared to existing research.

It was noted that most patients were discharged from intensive care, corroborating Rodriguez's findings, where it was verified that 79.3% of those hospitalized were discharged from the ICU.²⁷

It was also observed that almost 36% of the elderly died, whereas in the BREATHE study, the mortality rate was 12.6% of patients with HF in Brazil,²⁸ and, according to DATASUS, the mortality rate of elderly people with HF in Salvador, in the year 2015, was 13.11%.⁶

CONCLUSION

It was verified that the elderly with HF hospitalized in the intensive care unit are mostly male, over 70 years old, brown with low education, have arterial hypertension as the main risk factor for HF and with etiology for congestive HF. These elderly patients were admitted for cardiorespiratory comorbidities and they had a reduced ejection fraction, remained hospitalized for at least seven days in the sector and most of them were discharged to the hospitalization unit.

It is concluded that HF is an important factor of hospitalization, especially in the elderly, and that recognizing the clinical and epidemiological profile of the assisted clientele may favor the restructuring of existing care models that still do not achieve satisfactory results among the elderly group in reach of disease control.

As a limitation of the study, the number of information missing in the medical records for mandatory variables around 25% is highlighted. It is suggested to maintain the research in subsequent years to give greater power to the study.

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