■ Original Article
doi: https://doi.org/10.1590/1983-1447.2019.20180285

Characteristics of elderly patients attended in an emergency room due to falls

Características dos idosos atendidos em um pronto-socorro em decorrência de queda

Características de los ancianos atendidos en un servicio de socorro como consecuencia de la caída

Sabrina Daros Tiensoli[a]
Merielle Lúcia dos Santos[b]
Alexandra Dias Moreira[c]
Allana dos Reis Corrêa[c]
Flávia Sampaio Latini Gomes[c]

How to cite this article:
Tiensoli SD, Santos ML, Moreira AD, Corrêa AR, Gomes FSL. Characteristics of elderly patients attended in an emergency room due to falls. Rev Gaúcha Enferm. 2019;40:e20180285. doi: https://doi.org/10.1590/1983-1447.2019.20180285.

ABSTRACT

Objective: To describe the characteristics of elderly patients attended in a teaching hospital emergency room due to falls.

Method: Descriptive, quantitative, cross-sectional study performed at a hospital emergency room. The data was collected in November 2017, considering the medical records of 1.460 elderly patients, with a registry related to fall as the main complain. A descriptive analysis of the data was performed.

Results: The main results show that most elders were female (66.92%), older than 80 years old (27.27%), single (41.37%), and hypertensive (78.79%). Falls from ground level comprised 88.56% and their main consequence was trauma (55.65%). 66.30% were discharged after consultation.

Conclusion: The characteristics of the elderly were: female, age above 80 years old, single, and hypertensive. The most frequent type of fall was from ground level, traumas were the main consequences and the discharge after consulting the most common outcome.

Keywords: Accidentals falls. Health of the elderly. Emergency medical services.

RESUMO

Objetivo: Descrever as características dos idosos atendidos no pronto-socorro de um hospital de ensino em decorrência de queda.

Método: Estudo descritivo, quantitativo, transversal, realizado no pronto-socorro de um hospital. Os dados foram coletados no mês de novembro de 2017, no prontuário de 1.460 idosos, com registro de queixa principal relacionado à queda. Foi realizada análise descritiva dos dados.

Resultados: Os principais resultados demonstram que a maioria dos idosos era do sexo feminino (66,92%), com idade acima de 80 anos (27,27%), solteiros (41,37%) e hipertensos (78,79%). 88,56% tiveram queda do mesmo nível, tendo como principal consequência o trauma (55,65%) e 66,30% receberam alta após consulta.

Conclusão: As características dos idosos foram: sexo feminino, idade acima de 80 anos, estado civil solteiro, e presença de hipertensão arterial. O tipo de queda mais frequente foi do mesmo nível, sendo o trauma a principal consequência e a alta após consulta o desfecho mais apontado.

Palavras-chave: Acidentes por quedas. Saúde do idoso. Serviços de saúde de emergência.

RESUMEN

Objetivo: Describir las características de los ancianos atendidos en el pronto socorro de un hospital de enseñanza como consecuencia de la caída.

Método: Estudio descriptivo, cuantitativo, transversal, realizado en el centro de atención de un hospital. Los datos fueron recogidos en el mes de noviembre de 2017, en el prontuario de 1.460 ancianos, que tenían registro de queja principal relacionado a la caída. Se realizó un análisis descriptivo de los datos.

Resultados: Los principales resultados demuestran que la mayoría de los ancianos era del sexo femenino (66,92%), con edad superior a 80 años (27,27%), solteros (41,37%) e hipertensos (78,79%). El 88,56% tuvo caída del mismo nivel, teniendo como principal consecuencia el trauma (55,65%) y el 66,30% recibieron alta tras consulta.

Conclusión: Las características de los ancianos fueron: sexo femenino, edad superior a 80 años, estado civil soltero, y presencia de hipertensión arterial. El tipo de caída más frecuente fue del mismo nivel, siendo el trauma la principal consecuencia y la alta después de consultar el desenlace más señalado.

Palabras clave: Accidentes por caídas. Salud del anciano. Servicios médicos de urgencia.

[a] Universidade Federal de Minas Gerais (UFMG), Escola de Enfermagem, Programa de Pós-Graduação. Belo Horizonte, Minas Gerais, Brasil.

[b] Hospital Risoleta Tolentino Neves (HRTN), Programa de Residência Integrada Multiprofissional em Saúde. Belo Horizonte, Minas Gerais, Brasil.

[c] Universidade Federal de Minas Gerais (UFMG), Escola de Enfermagem. Belo Horizonte, Minas Gerais, Brasil.

INTRODUCTION

The natural aging process is related to physiological changes such as the decline of muscular strength, due to reduced parameters of muscle mass and bone alterations, besides a deficit in balance and a slower reaction time, that can cause falls and chronic-degenerative health problems in the elderly[1].

People with 60 years or more represent more than 12% of the world's population, and by 2030 this rate will increase to 16.5% worldwide and 0% in less developed regions[2]. In Brazil, according to the last census, conducted in 2010, 10% of the population was already in the age group above 60 years, which is equivalent to approximately 20 million people. It has been estimated that by 2020 this number will be of 28.3 million and by 2050 approximately 64 million[3]. This age structure has a direct impact on society, not only within the scope of social security, but also in the health system[2].

In view of this national and international scenario, the World Health Organization (WHO) recommends replacing curative care models, whose focus is on the treatment of diseases, with health systems that provide integral care for the elderly, in order to better deal with their demands. In the meantime, health actions should be focused on health promotion, disease prevention, treatment, and rehabilitation, as well as on the structuring of policies so that the elderly, considering the population diversity, could obtain satisfactory living conditions[4]. This integral approach aims, above all, to prevent disabilities, a common situation in this age group.

Falls could be incapacitating events that mostly affect the elderly population, leading to, due to its later consequences, an increase in dependence, a decrease in quality of life, and higher costs to the health system[5]. It is a frequent and limiting situation, and its impact has been overlooked by Brazilian society, since it is common to consider that, with aging, falls are inevitable[6]. However, they are events that must be prevented since they can cause injuries, emotional disturbances, functional decline, and death[7].

In Brazil, approximately 30% of the elderly fall once a year, and the risk of falling significantly increases with age, reaching 50% above 80 years of age[8]. According to the Violence and Accident Surveillance system (VIVA), from September to November 2014, from the total number of falls, 17.074 were attended and registered in emergency and urgency vigilance services in the 24 capitals and the Federal District. 2.514 (31.4%) of these took place among the elderly[9].

It can be observed that falls are more frequent among women, retired individuals, with low income and low educational levels, in the age group above 70 years, and among elders who use medications regularly and have multiple comorbidities[10]. However, there is a lack of studies on the subject in the Brazilian population, especially with large samples and in the hospital environment.

Considering the magnitude of this problem, the following question is asked: what are the characteristics of the elderly attended in the emergency room of a teaching hospital due to falls? It is essential to increase the knowledge about falls in the elderly, their characteristics and consequences, enabling the elaboration of health promotion strategies, the development of preventive measures, and the adequate planning of professional actions to attend this population.

In this context, this study aimed to describe the characteristics of the elderly attended in the emergency room of a teaching hospital due to falls.

METHODS

This is a cross-sectional descriptive study carried out in the emergency room of a public teaching hospital of Belo Horizonte, Minas Gerais[11]. The hospital is a reference in the north region of Belo Horizonte and adjacent municipalities, for an estimated population of 1.1 million inhabitants, responsible for clinical and surgical urgency, traumatology and non-traumatology services[12].

The data collection was performed in November 2017, considering the electronic medical records, in a room provided by the hospital, where there was a computer with the records of consultations filed by the MV® information system. The inclusion criteria were: treatment record with 60 years old or older whose main complaint at the time of reception was related to a fall.

From January to December 2015, 60.421 records were registered in the emergency room. From these, 9.868 were of 60 years old or older patients. The records that did not contain the main complaint were excluded from the study, leaving 8.751 records. Of the 8.751 records, 1.460 were of elderly, whose main complaint was related to a fall. Therefore, the sample was of 1.460 elderly people who fell in the year 2015.

The variables were: gender; age; marital status; presence of a companion at the time of registration at the emergency room; comorbidities; and region of residence, according to the regional classification established by the Municipal Health Department of Belo Horizonte[13] or municipalities belonging to the metropolitan area of Belo Horizonte.

In addition, the health assistance variables were month; time of day, considering morning (07h01 to 13h00), afternoon (13h01 to 19h00), and night (19h01 to 07h00); day of the week; NS length of stay in the emergency room (in minutes).

Variable fall was verified and categorized in falls from ground level, which are those in which the patient falls from a height that is the same of their own, and falls from higher levels, that is, falls from other heights, such as trees, roofs, and stairs[9], including the place of the fall.

The flowchart and risk classification were variables defined according to the Manchester Risk Classification System (SMCR), that is based on categories of signs and symptoms and contains 52 flowcharts that are selected for the specific situation/complaint and presented by the user at the time of reception in the service[13]. For risk classification, the severity of the fall is classified using five colors related to the priority and the maximum time for the first medical attention, which are: red (emergency - 0 minutes); orange (very urgent - 10 minutes); yellow (urgent - 60 minutes); green (not very urgent - 120 minutes), and blue (not urgent - 240 minutes)[14].

The consequence of the fall was related to the diagnosis received or clinical evolution.

Regarding the outcome after the assistance**,** the following were considered: discharge due to abandonment by the patient; discharge after consultation; hospital internment; transfers to another hospital; and death.

The data selected from the hospital system was organized in a Microsoft Excel® worksheet and a descriptive analysis of the categorical variables was presented in absolute and relative frequency, while the numerical variable was presented by median and interquartile ranges, after the verification of a non-normal distribution by the Shapiro-Wilk Test. The data was analyzed in the Stata statistical software, version 12.1. In some registries, there was no information on comorbidities (n = 706) and on the consequence of the falls (n = 1.355).

The study was approved by the Research Ethics Committee of the Federal University of Minas Gerais, under the Certificate of Presentation for Ethical Assessment (CAAE) number 58499516.2.0000.5149. Since the collection included only secondary data, it was not necessary to apply the Free and Informed Consent Form and there was no identification of the participants, respecting Resolution 466/2012 of the National Health Council.

RESULTS

From the sample studied (n = 1.460), the majority were female (66.92%), older than 80 (27.27%), and single (41.37%) (Table 1). There was a predominance of elderly people who arrived at the emergency room alone, who were taken by the Mobile Emergency Assistance Service or the Fire Department (34.25%).

Table 1 - Number and percentage of elderly who fell and were attended in the emergency room of a teaching hospital. Belo Horizonte, Minas Gerais, Brazil, 2015 (n=1.460)

Features	n	%
Gender		
Female	977	66.92
Male	483	33.08
Age (years)		
60 to 64	341	23.34
65 to 69	292	20.01
70 to 74	222	15.20
75 to 79	207	14.18
80 years or more	398	27.27
Marital status		
Single	604	41.37
Married/Stable union	502	34.38
Widower	275	18.84
Divorced/Separated	79	5.41

Source: MV® information system of the hospital studied, 2015.

Regarding the presence of comorbidities, the main pathological conditions that may predispose to a fall were considered [1], and this variable was recorded in 706 medical records. The most frequent disease was the systemic arterial hypertension (SAH - 78.79%) and *diabetes mellitus* (DM - 28.79%) (Image 1).

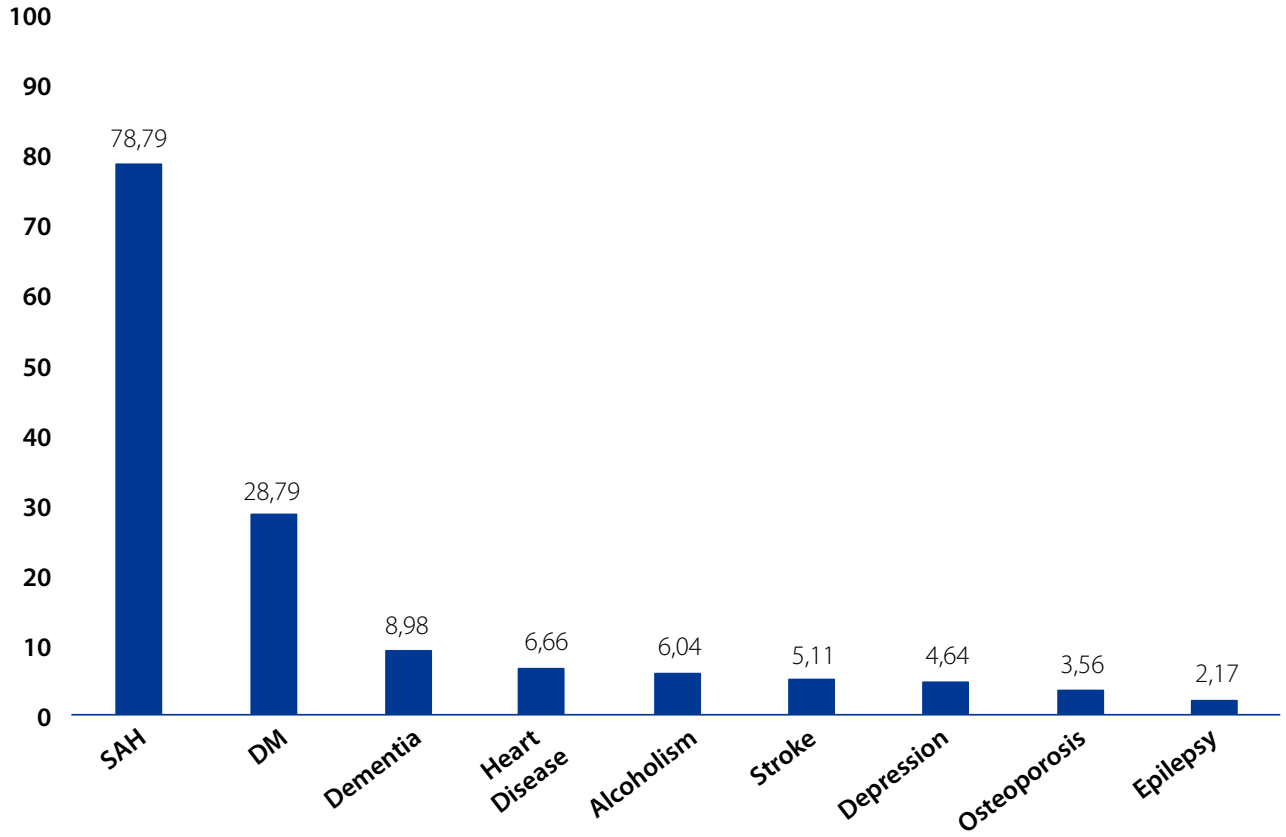

Image 1 - Comorbidities of the elderly who fell and were attended in the emergency room of a teaching hospital. Belo Horizonte, Minas Gerais, Brazil, 2015 (n=706)

Source: MV® information system of the hospital studied, 2015.

Concerning the location of the elderly houses, the region Venda Nova was the most cited (39.18%), followed by the North region (25.27%).

The analysis of the characteristics of assistance showed a greater frequency of falls in the months of June and July (11.23% and 10.00%, respectively), during the morning (36.58%) and afternoon (36.30%), that is, 72.88% of cases occurred during the day. Regarding the days of the week, the proportion was homogeneous (variation less than 10.00% between days), and on Tuesday there were more records (14.79%). The length of stay of these patients in the emergency room ranged from 6 minutes to 24 hours, with a median of 235 minutes (IQ: 114-443).

Regarding the type of fall, falls from ground level were more frequent (88.56%) and the place with the highest occurrence of falls was the stair (38.78%).

According to the assistance flowchart, the most common type of assistance was for falls (37.60%), followed by the flowchart of problems in the extremities (35.27%). Most elders attended were classified as yellow — urgent (66.14%) (Image 2).

Regarding the consequence of the fall, the trauma was the most common (55.65%,) followed by fracture of extremities (13.65%) (Table 2).

Regarding the outcome after the assistance, most of the elderly were discharged after consultation (66.30%), 274 were hospitalized (18.77%), 113 were discharged after abandoning the hospital (7.74%), and 86 were transferred to another hospital (5.89%). The proportion of deaths was 1.30%, and 12 (63.16%) of these had, as a consequence of the fall, hip fracture, while 7 (36.84%) had TBI.

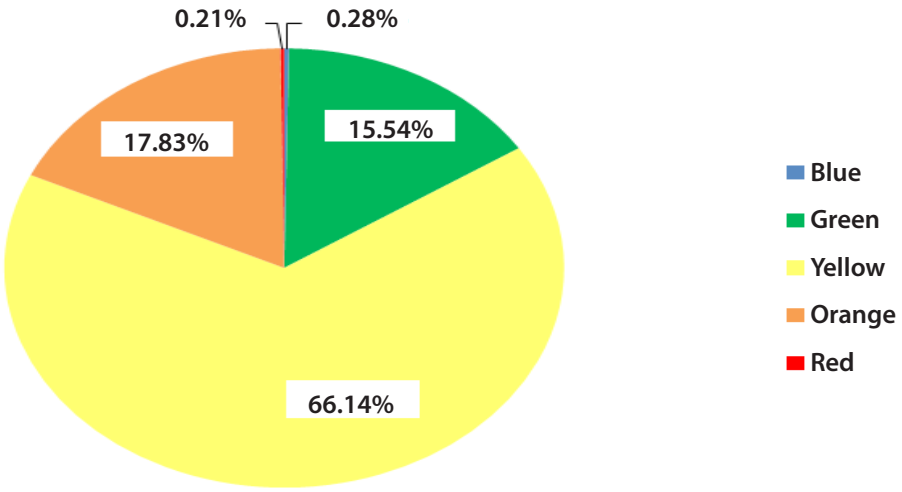

Image 2 - Risk classification of the elderly who fell and were attended in the emergency room of a teaching hospital. Belo Horizonte, Minas Gerais, Brazil, 2015 (n=1.460)

Source: MV® information system of the hospital studied, 2015.

Table 2 - Consequences of the fall in the elderly attended in the emergency room of a teaching hospital. Belo Horizonte, Minas Gerais, Brazil, 2015 (n=1.355)

Consequence of the fall	n	%
Trauma	754	55.65
Fracture of extremities	185	13.65
Mild traumatic brain injury	169	12.47
Hip fracture	146	10.77
Column fracture	29	2.14
Pain	20	1.48
Moderate TBI	18	1.33
Rib fracture	14	1.03
Head and neck fracture	12	0.89
Severe TBI	8	0.59
Total	**1.460**	**100**

Source: MV® information system of the hospital studied, 2015.
Note: TBI - Traumatic brain injury

DISCUSSION

Among the 60.421 hospital records in 2015, 9.868 (16.33%) were of patients with 60 years or more, of which 1.460 (14.79%) were related to falls.

Age is one of the risk factors for falls, especially in the age group of 60 years or older. It can be observed that injuries related to falls in the elderly are associated with increased morbidity and disability, greater use of health services and greater risk of institutionalization. Even when the fall is not fatal, the event causes loss of confidence and functional decline[15]. The biological aging process causes structural and functional changes that progressively accumulate with age and may compromise the performance of motor skills, make it difficult for the individual to adapt to the environment, and predispose them to the occurrence of falls[16].

Regarding gender, it was observed that regardless of the age group or region of the world, both are considered a risk factor for falls. However, older women are more susceptible to falls and to serious injuries[17]. This can be explained

by the reduction of estrogen levels, progressive loss of bone mass, a decrease in lean mass and muscle strength, a higher prevalence of chronic diseases, as well as greater exposure to domestic activities[8]. Thus, although women live longer than men, they are exposed for a longer time to the effects of chronic noncommunicable diseases.

Regarding the marital status, the sample was predominantly composed of single, widowed, or separated elderly people. The occurrence of falls among the elderly who do not have a partner may be related to the fact that they do not have someone to share their daily tasks, the self-care activities and the promotion of a safe environment. In addition, these older people tend to live alone, being assigned tasks that, associated with postural instability, can generate risk situations for falls[6].

Another risk factor for falls includes the presence of comorbidities, such as neurological, cardiovascular, or endocrine pathologies; as well as the continuous use of medications for their treatment and a poor mobility, cognition and vision[17]. In the sample studied, comorbidities related to the risk factors described above were observed: arterial hypertension, *diabetes mellitus*, heart disease, stroke, and dementia. Hypertensive elderly people are approximately seven times more likely to suffer falls when compared to those who do not have this morbidity[18]. It is worth to consider that the class of cardiovascular drugs is among those most associated with falls[15]. When it comes to diabetic patients, they may present other risk factors for the occurrence of falls, such as decreased motor sensory function, neuromuscular and musculoskeletal deficits, and pharmacological complications[1].

When characterizing the assistance provided, it was verified that the majority were elderly people coming from the region where the hospital is located and are a reference for the population; the daytime period, during morning, was the most frequent; and the length of stay in the emergency room was relatively short (median: 4 hours). Other authors obtained similar results in relation to the time of day when the elderly seek the emergency care[9,19]. This preference may be related to the greater availability of people to accompany them, public or private transportation, physical and emotional security. In addition, during the day, the elderly perform most of their activities, and may be more susceptible to falls[19].

Regarding the length of stay in the emergency room, it is recommended that the elderly be removed early from this environment, as a longer stay may be related to additional morbidities, such as *delirium*[20].

When analyzing the falls, it was found that the most frequent type was the fall from ground level. These falls are generally associated with physiological changes that occur in the aging process, such as decreased visual acuity and motor strength, difficulty in locomotion, use of medications, and environmental factors[19].

Regarding the environmental factors, it was verified in this study that the place of greatest occurrence of falls was the stairs, which is an environment that is unsafe for the elderly, since it may present an unfavorable design, lack of handrails or guardrails, inadequate steps, no signs, or uneven or slippery floor[1]. In addition, this environment may become even more dangerous due to factors related to the clinical situation of the elder, such as decreased visual acuity, lack of balance, use of certain medications or their adverse effects, use of alcohol or other drugs.

It can be noted that in most of the registries evaluated there was no information on the place of occurrence of the fall. Its identification is an important determinant for the elaboration of public policies to promote the health of the elderly, directed to the control and prevent of accidents involving this group, through strategies that may involve both the elderly and their relatives[20]. An environment can be considered ideal for the elderly when it provides security, facilitates the development of its functionality and mobility, provides cognitive stimulation and social interaction, favors adaptation to changes, and is warm and familiar to the elder [8]. It is important to note that the changes made at home must occur with the authorization of the elder, because their home and their objects have an affective memory.

It is emphasized that when the user arrives at the service and presents his complaint, the risk classification starts, and the flowchart is determined according to the main complaint and with the signs and symptoms presented. The most commonly risk classification protocol used in Brazil and recognized by the Ministry of Health is the Manchester System of Risk Classification (SMCR), in which the risk classification process is performed by nurses, after specific training[13].

The flowchart represents the main complaint or situation presented by the user at the moment of his/her entry into the institution, being the fall the most frequent complaint in this study. However, this proportion may be underestimated, since the user sometimes presents the complaint of falling, but the professional makes its classification in another flow chart, due to the signs and symptoms presented at the time of reception.

Thus, it was found that the second most frequently used flowchart was the one related to problems in extremities. Such finding may be justified because of the signs and symptoms presented by the user at the time of the

risk classification, since much of the consequences of the fall are related to fracture, pain, limitation of mobility, or strength of the extremities.

The efficiency of the emergency and urgency network is dependent on a quality reception. In this way, it is possible to analyze whether the search for the service was necessary[14]. SMCR correlates the risk to a color, and a maximum time to offer medical attention is determined[13]. Most elders were classified as yellow, which indicates urgent situations, in which the patient needs care as quickly as possible, but there is not an immediate risk of life[14], which leads to the belief that these patients are not seeking service without a real need. Falls are among the main causes of morbidity and mortality in the elderly population[17], and are considered one of the most common reasons for hospitalization in this age group[8].

Hospitalization or the use of health services by the elderly because of falls is due to trauma or injury related to the event. In this study, it was possible to observe that the most frequent consequence of falls was trauma. The occurrence of minor injuries, or even when there is no injury, seriously affects the quality of life of the elderly, since it leads to fear of falling, loss of confidence, and consequent activity restriction, functional decline, social isolation, depression, and an increased risk of institutionalization[8,15,19].

The most frequently reported fall traumas were fractures in the extremities, mild TBI, and hip fracture. Although less than one in 10 falls of elderly results in fractures, the occurrence of this type of injury is distressing[15]. After all, the elderly, after the trauma, may present greater difficulty to recover and can remain restricted to the bed for a prolonged period. Consequently, they can develop other complications in the respiratory, vascular and tegumentary systems, such as pressure injuries[19]. These events commonly lead to loss of autonomy and independence of the elderly, and have direct impacts on their quality of life.

Specifically, regarding hip fractures, it was found in this study that they was the main cause of death in the elderly (63.16%), followed by TBI (36.84%). It is important to note that approximately 10% of the elderly population with hip fracture die within one month and 33% within one year[15]. TBI is one of the main public health problems worldwide, due to its high and increasing incidence, and because it represents an important cause of mortality[5].

Besides death, the most frequent outcome was discharge after consultation. Although hospital or health care discharges represent a positive outcome, receiving it does not mean that the person is fully recovered. The patients are often in the recovery process, and in need of care. In addition, in the sample studied, elderly people who left the health service with lesions resulting from falls related to locomotion problems were found. Such problems may negatively interfere with the activities that the elderly performed before the assistance or hospitalization[20].

In this context, this study reiterates the need for the health professional to direct his/her look at the relation between the fall and the quality of life of the elderly. Preventive measures should be adopted in order to maintain independence or minimize damage to their functional capacity, reducing hospitalizations resulting from this event and reducing the high costs that falls generate to the health system.

CONCLUSION

The predominant characteristics in the elderly who suffered falls were: female gender, age above 80 years, single marital status, and presence of arterial hypertension. The most frequent type of fall was from ground level, with the main consequence being trauma and having discharge after consultation as the most common outcome. In addition, the main flowchart used was the falls chart, and most elders attended were classified as yellow.

It is important to consider, as a limitation of this study the use of a convenience sample, which leads to the need of conducting new studies on the subject, especially with a random sample, representative of the Brazilian population. In addition, because the data was collected in medical records, some information was incomplete and it was not possible to cover the sample profile with other variables, making association tests and in-depth analysis of the data impossible. However, the methodological severity employed in all stages of the research and the magnitude of its sample, makes the internal consistency stand out.

It is important to elaborate multifactorial studies in order to identify the possible causes of falls in the elderly, helping to create strategies for the prevention and coping of the occurrence of these events, minimizing their repercussions and contributing to a healthy aging and a better quality of life for this population.

REFERENCES

1. Gasparotto LPR, Falsarella GR, Coimbra AMV. As quedas no cenário da velhice: conceitos básicos e atualidades da pesquisa em saúde. Rev Bras Geriatr Gerontol. 2014;17(1):201-9. doi: https://doi.org/10.1590/S1809-98232014000100019.
2. Lloyd-Sherlock P, McKee M, Ebrahim S. WHO washes its hands of older people. Lancet. 2018;391(10115):25-6. doi: https://doi.org/10.1016/S0140-6736(17)33313-5.
3. Instituto Brasileiro de Geografia e Estatística. Sinopse do censo demográfico: 2010. Rio de Janeiro: IBGE; 2011 [cited 2018 Jan 18]. Available from: https://biblioteca.ibge.gov.br/visualizacao/livros/liv49230.pdf.

4. World Health Organization (CH). World report on ageing and health. Geneva: WHO; 2015 [cited 2018 Jan 18]. Available from: https://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811_eng.pdf?sequence=1.
5. Oliveira KAD, Rodrigues CC, Ribeiro RCHM, Martins CS, Abelan US, Fernandes AB. Causes of trauma in elderly patients treated in emergency unit. Rev Enferm UFPE online. 2013 [cited 2017 Dec 15];7(4):1113-9. Available from: https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/11587.
6. Abrantes KSM, Menezes TN, Farias MCAD, Silva MIL, Rolim VE, Macedo JH, et al. Caracterização das quedas em idosos socorridos pelo serviço de atendimento móvel de urgência. ABCS Health Sci. 2013 [cited 2018 Jan 03];38(3):126-32. Available from: https://www.portalnepas.org.br/abcshs/article/view/17.
7. Leiva-Caro JA, Salazar-González BC, Gallegos-Cabriales EC, Gómez-Meza MV, Hunter KF. Connection between competence, usability, environment and risk of falls in elderly adults. Rev Latino-Am Enfermagem. 2015;23(6):1139-48. doi: https://doi.org/10.1590/0104-1169.0331.2659.
8. Vitorino LM, Teixeira CAB, Vilas Boas EL, Pereira RL, Santos NO, Rozendo CA. Fear of falling in older adults living at home: associated factors. Rev Esc Enferm USP. 2017;51:e03215. doi: https://doi.org/10.1590/s1980-220x2016223703215.
9. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Departamento de Vigilância de Doenças e Agravos Não Transmissíveis e Promoção da Saúde. Viva - Vigilância de Violências e Acidentes: 2013 e 2014. Brasília: Ministério da Saúde; 2017 [cited 2018 Jan 03]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/viva_vigilancia_violencia_acidentes_2013_2014.pdf.
10. Abreu DROM, Azevedo RCS, Silva AMC, Reinners AAO, Abreu HCA. Características e condições de saúde de uma coorte de idosos que sofreram quedas. Rev de Enferm UFPE on line. 2015 [cited 2018 Jan 28];9(3):7582-9. Available from: https://periodicos.ufpe.br/revistas/revistaenfermagem/article/viewFile/10497/11362.
11. Santos ML. Características dos idosos atendidos em um pronto-socorro em decorrência de queda [monografia]. Belo Horizonte (MG): Hospital Risoleta Tolentino Neves; 2018.
12. hrtn.fundep.ufmg.br/ [Internet]. Belo Horizonte: Hospital Risoleta Tolentino Neves; c2018 [cited 2018 Jan 03]. Available from: http://www.hrtn.fundep.ufmg.br/.
13. Grupo Brasileiro de Classificação de Risco. Diretrizes para implementação do Sistema Manchester de Classificação de Risco nos pontos de atenção às urgências e emergências. 2. ed. Belo Horizonte; 2015 [cited 2018 Jan 20]. Available from: http://gbcr.org.br/public/uploads/filemanager/source/54c127352e3b2.pdf
14. Silva MDFN, Oliveira GN, Pergola-Marconato AM, Marconato RS, Bargas EB, Araujo IEM. Assessment and risk classification protocol for patients in emergency units. Rev Latino-Am Enfermagem. 2014;22(2):218-25. doi: https://doi.org/10.1590/0104-1169.3172.2405.
15. Davies EA, O'Mahony MS. Adverse drug reactions in special populations: the elderly. Br J Clin Pharmacol. 2015;80(4):796-807. doi: https://doi.org/10.1111/bcp.12596.
16. Pereira SG, Santos CBD, Doring M, Portella MR. Prevalence of household falls in long-lived adults and association with extrinsic factors. Rev Latino-Am Enfermagem. 2017;25:e2900. doi: https://doi.org/10.1590/1518-8345.1646.2900.
17. World Health Organization (CH) [Internet]. Geneva: WHO; c2018-2019 [cited 2018 Apr 03]. Falls; [about 1 screen]. Available from: https://www.who.int/news-room/fact-sheets/detail/falls.
18. Smith AA, Silva AO, Rodrigues RAP, Moreira MASP, Nogueira JA, Tura LFR. Assessment of risk of falls in elderly living at home. Rev Latino-Am Enfermagem. 2017;25:e2754. doi: https://doi.org/10.1590/1518-8345.0671.2754.
19. Meschial WC, Soares DFPDP, Oliveira NLBD, Nespollo AM, Silva WAD, Santil FLDP. Elderly victims of falls seen by prehospital care: gender diferences Rev Bras Epidemiol. 2014;17(1):3-16. doi: https://doi.org/10.1590/1415-790X201400010002ENG.
20. Coutinho MLN, Samúdio MA, Andrade LM, Coutinho RN, Silva DMA. Sociodemographic profile and hospitalization process of elderly assisted at an emergency hospital. Rev RENE. 2015;16(6):908-1005. doi: https://doi.org/10.15253/2175-6783.2015000600018.

Corresponding author:
Flávia Sampaio Latini Gomes
E-mail: latiniflavia@gmail.com

Received: 08.22.2018
Approved: 03.07.2019