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Original Article

AVALIAÇÃO DO RISCO DE QUEDAS DE PACIENTES EM SERVIÇO DE EMERGÊNCIA

EVALUATION OF THE RISK OF FALLS OF PATIENTS IN EMERGENCY SERVICE

EVALUACIÓN DEL RIESGO DE CUIDAS DE PACIENTES EN SERVICIO DE EMERGENCIA

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RESUMO

Objetivo: Identificar o risco de quedas nos pacientes em observação em um serviço de emergência, por meio da aplicação da Escala de Quedas de Morse. **Métodos:** Estudo quantitativo, com dados transversais do tipo descritivo, desenvolvido com 30 pacientes internados em um serviço de emergência do Rio Grande do Sul. Os dados foram coletados, entre junho e julho/2018, pela aplicação da Escala de Quedas de Morse. Nas primeiras 12 horas de internação os pacientes foram analisados pela estatística descritiva simples. **Resultados:** Dos 30 pacientes, 15 eram do sexo feminino e 15 do masculino, com idade entre 30 e 83 anos. Destes, 16 (53,33%) apresentaram alto, 07 (23,33%) médio e 07 (23,33%) baixo risco para quedas. Os fatores de risco mais encontrados foram: terapia endovenosa, diagnóstico secundário e marcha. **Conclusão:** Os dados representam um alerta aos enfermeiros para o diagnóstico precoce do risco de quedas, prescrição e implementação dos cuidados pela equipe de enfermagem. Assim como a necessidade de implantação de protocolos de prevenção de quedas no serviço de emergência e a realização da avaliação do risco de quedas, diariamente, pelo enfermeiro como uma ferramenta para garantir um cuidado seguro.
Descritores: Acidentes por Quedas; Emergências; Pesos e medidas; Enfermagem.

ABSTRACT

Objective: To identify the risk of falls in patients under observation in an emergency service, through the application of the Morse Falls Scale. **Methods:** A quantitative study with descriptive cross-sectional data was developed with 30 patients in emergency service in Rio Grande do Sul. Data were collected from June to July 2018. In the first 12 hours of hospitalization, patients were analyzed by simple descriptive statistics. **Results:** Of the 30 patients, 15 were female and 15 male, aged between 30 and 83 years. A total of 16 patients (53.33%) presented a high risk of falling, while 07 (23.33%) presented medium risk and 07 presented (23.33%) low risk. The most common risk factors were: intravenous therapy, secondary diagnosis, and gait. **Conclusion:** The results represent an alert to nurses for the early diagnosis of the risk of falls, prescription, and implementation of care by the nursing team. Furthermore, there is a need to implement protocols for the prevention of falls in the emergency service and to perform fall risk assessments by nurses on a daily basis as a tool to ensure safe care.
Descriptors: Accidental Falls; Medical Emergencies; Weights and Measures; Nursing.

RESUMEN

Objetivo: Identificar el riesgo de caídas en los pacientes en observación en un servicio de emergencia, por medio de la aplicación de la Escala de Caídas de Morse. **Métodos:** Estudio cualitativo, descriptivo, desarrollado con 30 pacientes internados en un servicio de emergencia de Rio Grade del Sur. Datos recolectados entre junio y julio de 2018, por medio de la aplicación de la Escala de Caídas de Morse. Las primeras 12 horas de internación de los pacientes fueron analizadas por la estadística descriptiva simple. **Resultados:** De los 30 pacientes, 15 eran del sexo femenino y 15, masculino, con edad entre 30 y 83 años. De estos, 16 (53,33%) presentaron alto, 07 (23,33%) promedio y 07 (23,33%), bajo riesgo para caídas. Los factores de riesgo más encontrados fueron: terapia endovenosa, diagnóstico secundario y marcha. **Conclusión:** Los datos representan una alerta a los enfermeros para el diagnóstico precoz del riesgo de caídas, prescripción e implementación de los cuidados por el equipo de enfermería. Así como la necesidad de implantación de protocolos de prevención de caídas en el servicio de emergencia y la realización de la evaluación del riesgo de caídas, a diario, por el enfermero como una herramienta para garantizar un cuidado seguro.
Descriptores: Accidentes por Caídas; Emergencias; Pesos y Medidas; Enfermería.

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INTRODUCTION

The World Health Organization (WHO) has developed actions aimed at protecting the health of the population and intervening in the risks arising from the use of products and services subjected to it. In order to guarantee patient safety and provide qualified assistance, surveillance, control, regulation and monitoring practices are used on health services and the use of technologies available for care[1].

In this context, the Global Patient Safety Alliance released, during 2008 and 2009, the new guidelines for patient safety, which translate scientific knowledge into practical solutions to be disseminated globally with a view to minimizing adverse events. Among these are the identification of the patient; communication during patient shift and patient transfer; performing the correct procedure, in the correct place; the control of concentrated solutions of electrolytes; safety in medication during care transitions during the shift; correct connections between catheters and probes and the prevention of falls[2].

Adverse events are characterized as undesirable but preventable incidents that occur during health care. These can cause damage to the structure or function of the body, or harmful effect such as illness, injury, disability and even death, and may be physical, social and / or psychic[3].

Among the main adverse events to be prevented in health institutions, a reduction in the risk of falls is worth mentioning. By falling, it is understood an unintentional contact with the support surface as a consequence of the change of position of the person to a level lower than its initial position, without having intrinsic determinant factor[4].

The falls in hospitalized patients cause countless immediate consequences for the person who suffered it. In addition to tissue damage, they are cited as consequences in increasing hospitalization time, high cost of treatment and patient's disbelief regarding nursing care[5].

The evaluation of the patient and the identification of the characteristics that can increase the probability of falls become fundamental for the planning of effective prevention strategies in the hospital scenario. Thus, the use of specific tools in identifying individuals with greater fall susceptibility may be an ally in preventing the incident[6].

There is research related to falls in different scenarios, however, in Brazil, there is a gap related to studies that investigate the incidence of this event in an emergency environment, as well as the risk assessment, through validated instruments. Among these, there is the Morse Fall Scale (MFS), which effectively identifies the risk of falls in adults who are hospitalized. It is characterized as a scale translated and adapted transculturally to the Portuguese language and worldwide used[7].

The evaluation of the patient for the risk of falls, both at the time of admission to the health institution and in the course of hospitalization should be performed, since it becomes an important care tool. Thus, it allows health professionals, especially nurses, to be responsible for the systematization of care, implement the necessary care for the prevention of adverse events[1].

Considering the problems that the falls may cause to the patient, the institution and the health team, the following research question is presented: what are the risk factors related to falls, found in an emergency service? Faced with this questioning, this study aimed to identify the risk of falls in patients under observation in an emergency service, through the application of the Morse Falls Scale.

METHOD

Cross-sectional descriptive study[8,9], developed in an emergency service of the central region of Rio Grande do Sul, whose data collection occurred from June and July 2018.

For the selection of the subjects of this research, random sampling was used, with inclusion criteria for patients older than 18 years in adult observation beds, with up to 12 hours in observation. The choice for this time criterion was due to the fact that the MFS is indicated to be applied at the moment of admission of the patient and, daily, while in the hospital environment, or also, with each change of clinical conditions. In this sense, patients hospitalized more than 12 hours would make it impossible to reassess situations and risks.

Patients who did not have a cognitive capacity preserved to authorize the study were excluded from the study. For selective cognitive evaluation of participants, the instrument called Mini Mental State Exam (MMSE) was used, which is an instrument for cognitive evaluation and screening of dementia[10].

The random sample is justified by the need to define the profile of the patients seeking the emergency service and the risk factors for the occurrence of falls. Data collection was performed through the application of MFS to the patient, during the first 12 hours of its observation. The sample number (N) was 30 participants. Data analysis was performed using simple descriptive statistics, supported by national and international publications, as well as the patient safety reference in the discussion of the presented data.

The emergency service, the data collection scenario of this study, has 12 observation beds, either male or female, depending on the demand. However, due to the fragility of referrals to referral services in the corresponding health region, as a consequence of the high demand, the patients remain for more than 12 hours of observation. Sometimes they stay in the emergency room performing the necessary treatment until discharge. Also, during the period of data collection, this service underwent a process of structural reform, providing only three observation beds, further reducing bed rotation.

The MFS has six items with different scores between them, ranging from zero to 125 points. The patient classified between zero and 24 points has a low risk of falling; the patient classified 25 to 44 points has moderate risk of falls; and patients with 45 points or more have a high risk of falling[7].

The data collection instruments were applied in a sequential way, being the MMSE, the application of the MFS and, finally, the analysis of the medical record. These instruments were applied in the emergency service, individually, in the bed, after the explanation about the research and signing of the Free and Informed Consent Term (FICT), in two ways. The history of fall was self-reported by the patient, the presence of secondary diagnosis and the use of intravenous therapy was confirmed through the chart, walking aid, gait changes and mental status were evaluated based on the operational definition of the Morse Scale[7].

The research was guided by Resolution No. 466/12 of the Ministry of Health[11]. Data collection began after the approval of the institution and REC / UFN, under the no. 2,643,103, dated May 8, 2018.

RESULTS AND DISCUSSION

Thirty patients (15 females and 15 males, aged between 30 and 83 years, 56.67% of patients over 60 years of age) were included in the study (Table 1).

Table 1 - Sociodemographic characterization of patients under observation in emergency service - Rio Grande do Sul, Brazil, 2018.

Sociodemographic characterization of patients under observation in emergency service	
Sex	
Female	50.00%
Male	50.00%
Age	
Under 60 years old	43.33%
Over 60 years old	56.67%

Source: research data, 2018.

Patients older than 60 years had a high risk of falling (70.59%), according to MFS, when compared to patients younger than 60 years. A study carried out in an emergency department corroborates the data found in this study[12], also presenting a high risk of falls.

The age over 60 years is considered as the major risk factor for falls and for injuries resulting from this event. This fact is explained by the physiological alterations of aging itself, which are predictors of falls, such as problems i physical mobility, including postural instability and gait alteration, impairment of cognitive, functional and visual capacity. Other associated factors are chronic degenerative diseases and polypharmacy that are common conditions in the elderly and may also increase the risk of falls[13].

It was observed that the majority of patients had incomplete primary education (60.00%). A study indicates that the educational level influences the spatial location, so that when performing search tasks, people with a low level of schooling need more time and err on the task[14], which may increase the risk of falls.

The results of the study indicated that of the 30 patients evaluated, 16 (53.33%) presented a high risk for falls, seven (23.33%) presented

medium risk and seven (23.33%) presented low risk, according to MFS (Table 2).

Table 2 - Classification of patients regarding the risk of falls by the Morse Scale, the observation period - Rio Grande do Sul, Brazil, 2018.

Results of the application of the Morse Scale applied to patients under observation in emergency room		
History of Falls		
Yes	10	33.33%
No	20	66.67%
Secondary Diagnosis		
Yes	20	66.67%
No	10	33.33%
Ambulatory Care		
None / bedridden / aided by health professional	24	80.00%
Crutches / Walking stick / Walker	03	10.00%
Furniture / Walker	03	10.00%
Endovenous Therapy		
Yes	26	86.67%
No	04	13.33%
Gait		
Normal	20	66.67%
Weak	04	13.33%
Impaired / reeling	06	20.00%
Mental state		
Oriented / capable of capacity / limitation	25	83.33%
Overestimates Capacity / Forgets Limitations	05	16.67%
Morse Score*		
Low risk	07	23.33%
Medium risk	07	23.33%
High risk	16	53.33%
Total	**30**	**100%**

Source: research data, 2018.

* Notes: Scale score: 0-24, low risk; 25-44, medium risk; > 45 high risk.

The study in question points out that the emergency sector has a high number of patients with a high risk of falls (53.33%). A similar study shows that the emergency environment has specific characteristics such as crowded corridors, reduced space, high personnel flow, which in turn increase the risk of falls[12], yet, patients remain in these services for longer periods and require greater complexity in care.

However, despite the high rate of fall in emergency services, there are few studies that address the occurrence of falls in these services, presenting a greater number of studies performed in hospitalization units[12].

In this context, some particularities of the emergency services may attribute the high risk of falls to the patients, since, these sectors may present inadequacies of assistance equipment and physical structure [15]. Moreover, the stretchers used by the patients are sometimes narrow and high and generally do not have guardrails[15]. The overload of the nursing team is indicated as one of the risk factors for the occurrence of adverse event, and may negatively influence the quality of health care provided[16].

Because the service does not present a protocol for evaluating and preventing the occurrence of falls, it makes it difficult to plan nursing care, producing a lot of information and not identifying existing risks. In this regard, the Ministry of Health (MH), in collaboration with the National Agency of Sanitary Surveillance (ANVISA) and the FioCruz Foundation, has developed a protocol for the prevention of falls by the National Patient Safety Program in order to reduce the occurrence of falls and their damage, to patients[1].

In the meantime, it was noticed that the institution studied did not present a protocol for the evaluation and prevention of falls, which existed were initiatives in the Patient Safety Nucleus (PSN) to implement the fall risk assessment through MFS and the notification adverse events. With the support of this information, the responsible nurse adopted the necessary safety measures and prevention strategies.

Patients with a history of previous falls are more likely to present a new fall by developing activity similar to that which made them drop earlier. Considering the above, with the obtaining of information regarding the history of falls, the nurse can implement preventive measures[17]. Regarding the Fall History variable, ten (33.33%) of the study population presented a fall in the last three months, while 20 (66.67%) did not present a risk in this factor. In another study, it was also identified, at the admission of the patient, that 30.3% of the patients had a history of previous fall[18].

Another risk factor that is closely related to the occurrence of falls is the presence of Secondary Diagnosis, observed in 66.67% of the patients, that is, 20 patients presented one or more diagnoses, in addition to the reason for hospitalization, being the second prevalence, corroborating with another study that presented a higher percentage of patients with secondary diagnosis[6]. The institution of this study assists in a great demand of elderly with multiple diseases and, thus, ratifies the greater propensity to falls. With regard to ambulatory care, six (20.00%) patients had this risk factor, of which three (10.00%) used a wheelchair, walking sticks or walker and three (10.00%) were looking for support in furniture.

It was observed that, when questioned about the way they moved around the sector, 20% of the patients answered that they needed help to wander. However, when evaluated by the nurse in relation to walking, 33.33% of the patients presented some type of alteration, being weak or compromised. This data shows the importance of the nurse directing the attention in the initial evaluation of the patient, since sometimes this aspect is underreported or not properly evaluated, and the minority of the patients reports the need for ambulatory assistance. Recognizing this risk in advance, the nurse may prescribe adequate care, which will help prevent the occurrence of falls.

Because of the specificity of care in acute situations, as characterized by the emergency service, patients may go through periods of incapacity of locomotion, that is, previously independent patients may become temporarily dependent patients. A study[12] who performed a retrospective analysis in medical records, indicated that there are a large number of patients that move around the area, between procedures and restrooms, these patients are at high risk for falls. At that moment, guidance and immediate assistance are essential so that the patient does not try to get up and walk alone, exposing himself to the risk of falling.

The use of intravenous therapy for hydration and medication is considered a risk factor for falls and, in this study, was the most prevalent factor, constituting 86.67% of the cases. The patient who uses a device for fluid therapy needs to pay more attention to the device and this can cause him to be distracted by wandering, putting him at risk of falling[7].

Another factor that may influence a greater risk of falls in patients undergoing intravenous therapy is the fact that intravenous therapy is often associated with polypharmacy and may increase the risk of falls due to the effects of medications, such as valproic acid, tramadol, furosemide, glyphage, among others, which are proven to be related to the risk of recurrent falls, being called, fall enablers[19-22]. In addition, patients taking antihypertensive drugs are at increased risk of falls, as these medications can cause side effects such as postural hypotension, dizziness and the need to urinate frequently, among other effects, may cause falls and, consequently, fractures [20]. Also, it is observed that drugs associated with the risk of falls are widely used in the emergency services.

Change in mental status was also pointed out in other studies as a risk factor for falls [16]. In this study, five patients (16.67%) either forgot their limitations or overestimated their abilities related to ambulation. It is understood by overestimation or forgetfulness of limitations, the situation in which the patient is questioned as to their need for help to go to the bathroom without help and their answer is inconsistent or does not match their reality[22].

Age-specific alterations in balance-related systems, increased prevalence of chronic degenerative diseases and chronic and sometimes multiple use of medications may favor the onset of dizziness or aggravate the onset of this symptom, leading to greater physical, functional and emotional, which contributes to the occurrence of falls [22].

It is observed that patients under observation in the emergency department are subject to behavioral changes due to their acute clinical conditions, high personnel flow, and the unknown environment. For this reason, patients sometimes try to get out of bed and suffer falls. It

should be noted that the risk of falls increases as the coexistence of these factors increases[12].

The use of the scale of evaluation for the risk of standardized falls and adequate to the profile of the patients of the institution is a requirement of the Falls Prevention Protocol. The use of MFS enabled the evaluation of hospitalized patients in the emergency service, since it is simple to understand and fast to use, and can be used for patient admission and daily, as recommended both by the Ministry of Health protocol for falls prevention and by the author of the scale[1,22].

The high rate of patients under observation in the emergency department with high and medium risk of falls suggests the adoption of prevention strategies such as the use of patient evaluation for the risk of falls and the prescription of individual or collective actions to minimize or exclude the risk factors.

CONCLUSION

The application of MFS made it possible to provide an overview of the factors related to the fall in the patients that were observed in the emergency department of the institution, in addition to identifying a high risk for falls. Among the most commonly encountered risk factors are: intravenous therapy, secondary diagnosis and gait, which is an alert for nurses, regarding the early diagnosis of the risk of falls, planning and prescription of preventive care provided by nursing team, to these patients, as well as the dialogue with the health team as a whole.

The limitation of this study is the reduction of the number of hospital beds available during the data collection period, due to the structural reform in the mentioned service, being reduced to three beds of observation.

The study showed the need for the assessment of the risk of falls, daily, by the nurse, corroborating the need for these notes to be highlighted in the patient's chart so that all the staff can be aware of the patient's degree of risk.

The existence of few published studies on falls in emergency services made it difficult to compare with other cases and highlighted the importance of research on the subject. The need for implantation of fall prevention protocols in the emergency department and the assessment of the risk of falls, daily, by the nurse as a tool to ensure a safe care.

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