ABSTRACT

Objective: to identify the risk of pressure ulcer in elderly people hospitalized in a reference hospital in the city of Maceio, Alagoas, Brazil. Method: this is an exploratory cross-sectional study of prevalence, with a quantitative approach, carried out at the medical clinics of the General State Hospital Dr. Osvaldo Brandão Vilela, in Maceio, after the research was approved by the Research Ethics Committee of the Universidade Estadual de Ciências da Saúde de Alagoas, under the Protocol 1286. Data were obtained through the application of a structured form according to the Braden scale, reading of medical records, registration of the evolution, and medical and nursing prescription, besides the physical examination. Results: 13.9% had a high risk for developing pressure ulcer, 46.5%, moderate risk, 20.9%, low risk, and 18.6% showed no risk. Conclusion: patients affected by ulcers showed moderate risk for developing pressure ulcers. One realizes that the risk for individuals to suffer lesions isn’t associated to the data found in the literature. Descriptors: Risk; Elderly Person; Pressure Ulcer; Nursing.

RESUMO

Objetivo: identificar o risco de úlcera de pressão em idosos hospitalizados em um hospital de referência na cidade de Maceió, Alagoas, Brasil. Método: trata-se de um estudo exploratório transversal de prevalência, com abordagem quantitativa, realizado na clínica médica do Hospital Geral do Estado Dr. Osvaldo Brandão Vilela, em Maceió, depois da aprovação da pesquisa pelo Comitê de Ética em Pesquisa da Universidade Estadual de Ciências da Saúde de Alagoas, sob o Protocolo n. 1.286. Os dados foram obtidos por meio da aplicação de formulário estruturado de acordo com a escala de Braden, consulta aos prontuários, registro da evolução e prescrição médica e de enfermagem, além do exame físico. Resultados: 13,9% apresentaram risco alto de desenvolvimento de úlcera por pressão, 46,5%, risco moderado, 20,9%, risco baixo, e 18,6% não apresentaram risco. Conclusão: pacientes acometidos por úlceras apresentaram risco moderado de desenvolvimento de lesões por pressão. Percebe-se que o risco dos indivíduos sofrerem lesões não está associado aos dados encontrados na literatura. Descriptores: Risco; Idoso; Úlcera por Pressão; Enfermagem.

RESUMEN

Objetivo: identificar el riesgo de úlcera por presión en ancianos hospitalizados en un hospital de referencia en la ciudad de Maceió, Alagoas, Brasil. Método: esto es un estudio exploratorio transversal de prevalencia, con abordaje cuantitativ, realizado en la clínica médica del Hospital General del Estado Dr. Osvaldo Brandão Vilela, en Maceió, después de la aprobación de la investigación por el Comité de Ética en Investigación de la Universidad Estadual de Ciências da Saúde de Alagoas, bajo el Protocolo 1286. Los datos fueron obtenidos por medio de la aplicación de formulario estructurado de acuerdo con la escala de Braden, consulta a los prontuarios, registro de la evolución y prescripción médica y de enfermería, además del examen físico. Resultados: el 13,9% presentaron alto riesgo de desarrollo de úlcera por presión, el 46,5%, riesgo moderado, el 20,9%, riesgo bajo, y el 18,6% no presentaron ningún riesgo. Conclusión: pacientes afectados por úlceras mostraron riesgo moderado de desarrollo de lesiones por presión. Se percibe que el riesgo de los individuos sufrir en lesiones no está asociado a los datos encontrados en la literatura. Descriptores: Riesgo; Anciano; Úlcera Por Presión; Enfermería.
INTRODUCTION

Pressure ulcer (PU) is any change in the integrity of the skin resulting from unrelieved compression of soft tissues between a bony prominence and a hard surface; it’s often regarded as a complication in critically ill patients and it has a major impact on their recovery and quality of life.

The commonplace use of other terms to refer to the pathology was incorporated into daily practice, but it reveals misconceptions. The term decubitus ulcer, for instance, although routinely employed, doesn’t comprise the possibility of lesion occurrence in sites affected by the pressure on bony prominences when the patient is sitting, because the word “decubitus”, from the Latin “decumbere”, means “lying”. Likewise, the term “sore” shouldn’t be employed, since it only refers to the necrotic tissue which may exist on the ulcer. A PU may be covered by a sore, as well as there can be only the ulcer, without necrotic tissue on it. Therefore, the term sore should be used only when there’s necrotic tissue on the ulcer.2,3

In 2007, the National Pressure Ulcer Advisory Panel6, besides the previously defined four stages, added two new categories: suspected deep tissues lesion and unclassifiable lesion. Thus, the current classification according to severity is as follows:

- **Stage 0**: suspected deep tissues lesion: a localized purple or brown area with intact and pale skin or hematic blister, due to involvement of soft tissue by pressure and/or shear.

- **Stage 1**: intact skin with sustained hyperaemia in a localized area on a bony prominence. Stage 2: partial thickness loss of dermis, viewed as an ulcer with red-pink bed, without necrosis blister, or with serous content.

- **Stage 3**: full thickness loss; subcutaneous, it can be viewed, but bone, tendon, and muscle aren’t exposed.

- **Stage 4**: full thickness loss with bone, tendon, or muscle exposed; there may be necrosis. Unclassifiable: full thickness loss in which the bed is covered by necrosis and/or sore.

In advanced stages, the treatment of PUs can be time consuming and expensive, and, in some cases, surgical intervention is required. In Brazil, there’re no accurate data in the literature on the costs generated by PUs for the health care system. However, international studies show that each lesion may range from 2,000 to 30,000 dollars.5

The occurrence of PUs constitutes a problem for the health care system worldwide, since it involves social and economic impacts, affecting the population’s quality of life and raising both the morbidity and mortality indicators and the hospital costs. Further, it requires more effort from nursing, applied in caring procedures to solve preventable situations. Such ulcers affect hospitalized people with acute or chronic conditions, in long-stay institutions and/or at home.6

Demographic studies point out the population aging in the world, it’s expected that, by 2025, Brazil will occupy the sixth place among the countries with the largest amount of elderly people.7

With aging, the risk for emergence of lesions in the integument increases, since this becomes thinner, fragile, and there’s a loss in the subcutaneous fat layer and in the sensory capability. Thus, one of the most important systemic aspects, such as co-risk factor both for the lesion and for its maintenance is age, when generating a profound impact on the functioning of all physiological bodily systems.8

A very important factor in the development of PUs is advanced age □ there’re many changes which occur with aging, including the flattening of the junction between the dermis and epidermis □ less resistance to shear force and decreased ability to redistribute the mechanical pressure load.9 The length of time the client remains in the same position in bed causes discomfort and worsens the hygiene, nutrition, and immunity conditions presented.10

Regarding the etiologies of PUs, the interaction between the intensity and duration of the pressure to which the tissue is subject becomes a crucial factor with regard to their emergence. However, other factors intrinsic and extrinsic to the human body, regarded as secondary, contribute to its development.11

Among the intrinsic factors one highlights age, nutritional status, tissue perfusion, medication, chronic diseases, immobility, infection, anemia, skin sensitivity, reduction or loss of muscle tone, neurological disorders, and incontinence, very usual in patients admitted to home care services.11

The extrinsic or external factors are those related to the lesion mechanism. Among these factors, one may mention pressure, shear,
Taking all the above mentioned into account, the nurse should aim at directing her/his attention, especially, towards the patients with a predisposition to have this kind of complication, since preventing is still the best medicine. In this sense, the nursing team should have professional competence to identify, minimize, and/or eliminate the risk factors for the PUs, because the precautionary approach should ground the nursing care practice.14

The prevention of PU should be recognized as a health problem requiring the involvement of all health professionals, but, especially, the nursing team, as it remains in the hospital and provides patients with direct care.14

Several authors, in order to provide more support to improve and increase the clinical ability of health professionals in the assessment of risk for PU and, thus, contribute to the prevention of these lesions, have proposed measuring instruments or scales for evaluating risk. The Norton, Gosnell, Waterlow, and Braden scales are the most frequently adopted in the Americas and in Europe; they differ with regard to scope, complexity, and ease of use.15

In Brazil, the Braden scale was translated and validated for the Portuguese language16, being the most well-defined in operational terms, with a high predictive value for the development of PU, allowing an evaluation of several factors related to the occurrence of PU, and its application requires from the evaluator a detailed examination of the patient’s status when compared to the aforementioned scales used for PU risk assessment in adult patients.9

The Braden scale17 consists of six subscales: sensory perception, skin moisture, activity, mobility, nutritional status, and friction and shear. All of them are rated from 1 to 4, with the exception of friction and shear, whose score ranges from 1 to 3. Total scores range from 6 to 23; the highest values indicate a low risk for PU and the lowest scores indicate a high risk for the occurrence of these lesions.

One knows that prevention measures to PU are relatively simple and inexpensive. The most important basic measure is a periodic change of patient positioning. The relief of pressure over a bony prominence for 5 minutes every 2 hours allows an adequate recovery of the tissue from the ischemic aggression to and it often prevents the emergence of a lesion. In the patient’s positional change, it’s important to avoid movements which cause friction or skin shear.18

In fact, analysis of the books, papers, and dissertations selected in the categorization of the theme analyzed herein always leads to the following statement: the prevention of PU in hospitalized patients isn’t that simple. Once more, it requires commitment from the nursing team. This commitment refers to ethics and the constant search for new techniques to be implemented in the prevention of PU, especially in hospitalized patients, because they have difficulties for mobilizing in the bed, they’re dehydrated, and, also, they undergo an enormous stress in the sector and in the hospitalization itself.14

The development of researches and technology, as well as scientific evidence, has shown that the PU isn’t only a responsibility of nursing, but, also, due to other multiple factors or to the multicausality of its occurrence, which go beyond the nursing team caring scope, i.e. the occurrence of PU involves a number of factors which need to be known by the nursing team and prevented, whenever it’s possible. In this approach, one criticizes the scientific positioning of modern nursing, in the sense that the PU in hospitalized patients was a result of nursing care deficit.14

Therefore, nowadays, the scientific community has been advancing in researches for better understanding PU, stressing the importance of the nursing care in which the nurse’s role is planning assistance appropriate to each patient’s needs and guiding and coordinating the other members of the nursing team. Besides coordinating the assistance, the nurse should develop her/his competences along with the interdisciplinary team, so that each member collaborates with her/his technical and scientific knowledge, caring for the patient in an integral way.14

Taking into account the social importance and magnitude highlighted in this study, it was relevant to identify what’s the risk for hospitalized elderly people to develop PUs in a reference hospital in the city of Maceio.

**OBJECTIVE**

- To identify the risk for PUs in hospitalized elderly people in a reference hospital in the city of Maceio.

**METHOD**

This is a cross-sectional study of prevalence, exploratory, with a quantitative approach, carried out at the medical clinics of the General State Hospital Dr. Osvaldo França SPS, Melo JS de, Araújo LS et al.
Brandão Vilela in Maceio. Data collection was carried out within the green area, in the wards C, E, and F with about 60 beds, thus constituting itself as a reference in urgency and emergency care in the state of Alagoas. For one month and fifteen days, through a census sample, the population of 43 seniors was selected, who were admitted to the medical clinics of the hospital within the period between August and October 2010. The choice of research subjects was randomly conducted by two researchers.

After the selection of research subjects, one collected data on the elderly people, who have already had PUs cases before and those who stayed hospitalized for at least 48 hours. Patients who presented changes in their consciousness levels and had no companions were excluded from the study.

There were two weekly visits to the institution for evaluating the patients, in an observational way, however, the data were also obtained from multiple sources, such as: applying a structured form according to the Braden scale and reading of the patients’ medical records (register of the evolution and the medical and nursing prescription). Data collection was initiated only after the approval by the Research Ethics Committee of the Universidade Estadual de Ciencias da Saude de Alagoas (Uncisal), under the Protocol 1286, and after the authorization by the Center for Studies of the hospital.

The questionnaire used was designed by the authors themselves; it consists of nine questions. Three of these questions contain data such as identification number of subjects, age, and sex; the remaining six questions were structured according to the Braden scale and reading of the patients’ medical records (register of the evolution and the medical and nursing prescription). Data collection was initiated only after the approval by the Research Ethics Committee of the Universidade Estadual de Ciencias da Saude de Alagoas (Uncisal), under the Protocol 1286, and after the authorization by the Center for Studies of the hospital.

The questionnaire used was designed by the authors themselves; it consists of nine questions. Three of these questions contain data such as identification number of subjects, age, and sex; the remaining six questions were structured according to the Braden scale. It’s worth stressing that it was filled only after the signing of a free and informed consent term presented to the participants or to a companion responsible for the elderly person.

The discomforts and risks that possibly may have occurred at the time of collection were purely subjective, such as embarrassment and doubt, among others. Ho...

According to the Braden scale, the item activity accounted for 60.5% of the clients and in the item friction and shear 48.8%, these had score 1, i.e. they were bedridden and had some problem, respectively. In the item mobility, score 2 had the highest percentage, 39.5%. Score 3 had the highest percentage in the item nutrition, with 46.5%.

Score 4 presented, in most cases of sensory perception and moisture, respectively, 51.2%...
and 48.8%. Out of the total of 43 patients, 46.5% of admitted patients had a moderate risk for emergence of PU, while 20.9% had low risk, 18.6% weren’t at risk, and only 13.9% exhibited a high risk (Figure 1).

Figure 1. Risk for developing pressure ulcer in elderly people at a reference hospital in Maceio, within the period between August and October 2010.

It was observed that among the respondents with PU, these were more frequently located in the sacral and trochanteric regions, however, these data couldn’t be quantified, since they weren’t included in the questionnaire.

**DISCUSSION**

The major development in the cell area in the last three decades has led the health professionals working in the prevention and treatment of wounds to a review of the traditional knowledge and procedures, many of which employed since antiquity, above all, with regard to the recognition that skin lesion is only one aspect of a holistic whole, which is the human being. This requires an interdisciplinary rationale, through systematic and integrated interventions, grounded on a decision-making process which aims as a final result, tissue restoration with the best aesthetic and functional level.

When analyzing the gender of the elderly people participating in the study (51.1% male and 48.8% female), one concludes that both sexes had an equal percentage with regard to high risk of developing PU, thus, the factor gender wasn’t relevant for the emergence of ulcers in this study.

Unlike this datum found in the literature, the presence of PU in hospitalized patients has proven to be higher among men (57.7%) than women (42.3%). Although this result confirms the divergence regarding the distribution of the occurrence of PU among males and females, most statistical analyses don’t show any significance related to this variable.

The age group presenting the highest risk for developing PU was between 60 and 80 years, corroborating the literature, since, due to age advancing, many changes are observed in the skin, including the reduction of dermal layer, its vascularity, the epidermal proliferation, and its properties, such as the perception of pain, the inflammatory response, and the barrier function, making it more vulnerable to lesion. These changes occur slowly and gradually and they’re more easily observed in individuals over 60 years.

The item activity in the Braden scale showed that 60.4% of patients were bedridden and, for this reason, they were likely to develop skin lesions. In the item friction and shear, the elderly people presented a higher percentage in score 1, with 48.8%, i.e. they presented some problem. In the item mobility, score 2 had a higher percentage, 39.5%, indicating that these elderly people showed to be very limited. Among the elderly people studied, 46.5% had score 3 in the item nutrition, proving that their nutritional status was appropriate.

When analyzing sensory perception (51.2%) and moisture (48.8%), one perceived that they had a score 4, i.e. most clients didn’t have any limitation and seldom stayed moist.

According to the Braden scale, the items activity, mobility, and friction showed score 1 in more than half of the patients. The score 3 was found on most of the items nutrition (65.4%) and moisture (59%). There was no patient with a score 4 in the item activity and only 2.6% in the item mobility.

Out of the total 43 patients, 46.5% of hospitalized patients had moderate risk for PU emergence, while 20.9% had low risk, 18.6% weren’t at risk and only 13.9% exhibited a high risk. There was divergence when these data were compared in other study, where half of admitted patients had a high risk for PU emergence, while 16 (20.5%) had a

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English/Portuguese


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CONCLUSION

The data from this study had a sample with moderate risk for developing PU. The factor which most contributed to this result was activity, since 60.4% of the elderly people were bedridden. This study is extremely important for professionals, academic researchers, and the community, as it highlights the key factors contributing to the emergence of these lesions. It’s recommended that further studies are conducted at the medical clinics of this hospital, so that there’s a more comprehensive investigation on the risk for developing PUs in the elderly people.

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