







Pressure ulcers in older adults

Úlceras por presión en adultos mayores

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Abstract

The problem of pressure ulcers is an issue that has a great impact on patient morbidity and mortality, so risk assessment and nursing care to prevent them have become one of the most important actions to reduce the incidence of pressure ulcers. This work aimed to conduct a literature review on pressure ulcers in elderly patients. A descriptive literature review study of digital documents was conducted between 2017 and 2021; 1,156 documents were recorded, of which 1,126 were excluded, finally selecting 30 documents. This study concludes that the prevalence of pressure ulcers in the elderly population increased to 7.43% in Latin American hospitals. The most found associated factors are moderate and severe cognitive impairment, a functional level of partial or total dependence, the presence of urinary incontinence, among others. On the other hand, according to the studies reviewed, it was shown that the complications generated by the appearance of pressure ulcers in the elderly can alter health and quality of life, leading to disability or even death. Prevention of pressure ulcers can be effective if adequate health strategies are followed, such as changes in position when the patient is bedridden, skincare, and supportive measures.

Keywords: Ulcers, pressure, older adults, nursing, specialized care.

Resumen

El problema de las úlceras por presión es un tema que tiene un gran impacto en la morbilidad y mortalidad de los pacientes, por lo que la valoración del riesgo y los cuidados de enfermería para prevenirlas se han convertido en una de las acciones más importantes para reducir la incidencia de las úlceras por presión. El objetivo fue realizar una revisión bibliográfica sobre las úlceras por presión en pacientes de edad avanzada. Se realizó un estudio de revisión bibliográfica descriptiva de documentos digitales entre 2017 y 2021; se registraron 1.156 documentos, de los cuales se excluyeron 1.126, seleccionando finalmente 30 documentos. Este estudio concluye que la prevalencia de las úlceras por presión en la población anciana aumentó a 7,43% en los hospitales de América Latina. Los factores asociados más encontrados son: el deterioro cognitivo moderado y severo, un nivel funcional de dependencia parcial o total, la presencia de incontinencia urinaria, entre otros. Por otro lado, según los estudios revisados, se demostró que las complicaciones generadas por la aparición de úlceras por presión en los ancianos pueden alterar la salud y la calidad de vida, llevando a la discapacidad o incluso a la muerte. La prevención de las úlceras por presión puede ser efectiva si se siguen estrategias sanitarias eficaces, como: cambios de posición cuando el paciente está encamado, cuidados de la piel y medidas de apoyo.

Palabras clave: Úlceras, presión, adultos mayores, enfermería, atención especializada.

Introduction

Pressure ulcers (PUs) is a localized injury to the skin and/or the underlying tissue, usually over a bony prominence, as a result of pressure or pressure in combination with shear. The elderly is a serious public health problem worldwide, its importance lies in the high prevalence and impact on patients with highly complex diseases, prostrate for a very long time, both at home and in hospital institutions¹. This incidence has a considerable increase in the intensive care area and the geriatrics service².

The population considered most vulnerable to suffer a pressure ulcer is the elderly, due to the natural changes of aging that result in the progressive deterioration of the functional and mental capacities of the organism¹. Because of the above, the intervention of nursing personnel is essential, both for the prevention and treatment of pressure ulcers since appropriate actions focused on patient care and education of family members or caregivers have shown an impact on the reduction of this event³.

According to Valdez, et al.⁴, who analyzed the efficiency of hospital care in clinical areas which care patients with pressure ulcers, it was shown that this disease leads the patient to spend a long period in health institutions, the inclusion of home care during treatment works as a feasible alternative when combined with monitoring schemes and information to patients since such care makes the patient's life planned and functional. Another study indicates that 90% of pressure ulcers may be preventable, for this reason, timely and adequate intervention is necessary for their treatment and prevention, as well as the mediation of nursing personnel in educating the family members or caregivers of these patients⁵.

The research topic is relevant because of the prevalence of pressure ulcers in patients, despite the scientific evidence aimed at the care that should be taken and has been validated, the incidence remains high, for this reason, we must continue to strengthen the studies in the area to improve their prevention and proper treatment. This complication in the patient care has serious consequences for him and his family due to social distancing, isolation, increased health costs in the medium and long term, among others; for the health systems, increased length of stay, deterioration in the quality of care, cost overruns in infrastructure and human resources, among others⁶.

To cover the aim of the study, the following research questions were formulated: What is the prevalence of pressure ulcers; What are the factors associated with the development of pressure ulcers; What complications occur with the development of pressure ulcers; and What are the most effective treatments and nursing care to prevent pressure ulcers in older adults?

Methodology

A descriptive literature review study of digital documents was conducted, between 2017 and 2021; 1156 documents were registered, of which 1126 were excluded, finally selecting 30 documents.

The present research is of the qualitative systematic type, mainly because importance is given to scientific advances, which serve to review all existing research on the subject, considering the most relevant scientific experiments. For Moreno et al.⁷, "systematic reviews are clear and structured summaries of the available information aimed at answering a specific clinical question" (p.184). For this reason, the present investigation follows a qualitative systematic order, since on the scientific basis a conclusion is reached by answering the main objectives in an organized manner.

The search strategy was developed following the criteria of the prism statement, which served to transparently document the rationale for the review. The search was performed in English and Spanish in the following order in the Scielo, Redalyc, PubMed, and Medigraphic databases. The keywords to efficiently achieve the search of scientific information were, ulcers, pressure, older adults, nursing, specialized, care, úlceras, presión, adultos mayores, enfermería, cuidados especializados.

Inclusion criteria

The main selection criteria for this study were the incidences of pressure ulcers in older adults. In addition, criteria were admitted through the selection of articles extracted from high-quality databases worldwide with less than 5 years of having been published. On the other hand, the information had to be oriented to pressure ulcers, including hospitalized and home care patients. Studies from regional and community hospitals were included.

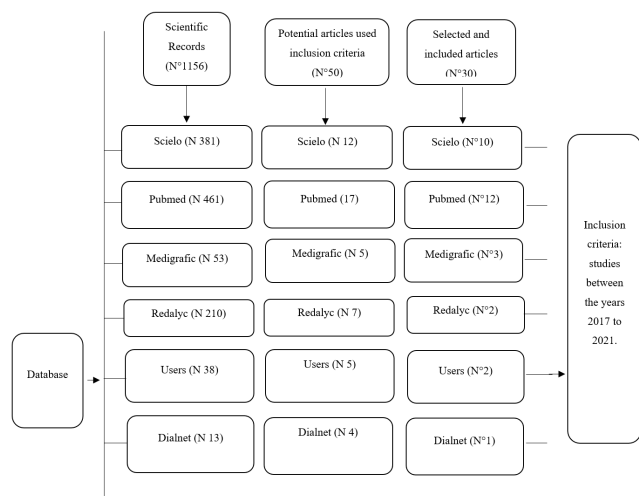
Exclusion criteria

The studies excluded were those that did not have the primary characteristics of the topic, that is, those that did not have a specific study regarding pressure ulcers in older adults, from the nursing point of view. Also were excluded articles that did not comply with the range of the last years of having been published, since the information was not accurate or up to date.

Procedures

The literature review was carried out in three phases, first the search in the main national and international bibliographic sources; this search was carried out prudently using keywords, both in English and Spanish. The second phase was where the selection of data was carried out through the application of inclusion and exclusion criteria; and the third phase, which in turn presented 3 parts for data analysis, the systematic review where all the findings included in the selected documents were extracted; then the development of the results from the similar findings. And finally, the union of the results into thematic categories. The procedures for selecting the findings were by critical reading of the selected studies. The thematic categories were grouped according to the objectives of the study.

Figure 1. Flowchart of the search, identification, and selection of the articles included in the review.



Through a literature review the topic of pressure ulcers in older adults was explored. Thirty articles were analyzed, which met the inclusion and exclusion criteria of the research. The results of the research process are also presented in Annex 1.

It has been found that, in 100% of the articles used for the research, the authors state that pressure ulcers represent a public health problem at present worldwide, being predominant in their appearance in older adults. We note

that the authors agree that the prevalence of pressure ulcers in patients over 60 years of age is due to various factors, the most important of which are deficient intervention on the part of nursing personnel.

We have seen that poor nursing assistance in terms of postural changes established every 2-3 hours for patients with long hospital stays and of advanced age is one of the main factors associated with the appearance of pressure ulcers. The progressive deterioration in the quality of life of the patients involved should be noted.

It has been established the importance of the nursing team's action in terms of timely and appropriate intervention for the treatment and prevention of pressure ulcers⁸.

Results and discussion

This study carried out a systematic review of the information obtained in clinical trials in the last 5 years corresponding to pressure ulcers in older adults. Giving a brief clarification of the objectives stated at the beginning of the research.

¿What is the prevalence of pressure ulcers? Table 1 shows the prevalence of pressure ulcers according to the studies found.

Table 1. Prevalence of pressure ulcers

YEAR	AUTHOR	COUNTRY	PLACE	STUDY POPULATION	PREVALENCE OF PRESSURE ULCERS
2019	Álvarez-Bolaños, and Cuevas-Budhart, 2019	Mexico	Acapulco Hospital	36	There was a prevalence of 63.9 %, which were diagnoses focused on the problem, 10 (27.8 %) diagnoses of risk, and 3 (8.3 %) of health promotion ¹ .
2020	Parra et al., 2020	México	General Hospital de Zona no. 30 of the Mexican Social Security Institute	460	Pressure ulcers most frequently affected the elderly. Their location and degree of severity are recurrent complications in this type of conditions ⁹ .
2018	Talens and Martínez	Spain	Chronic Wounds Unit	11.959	The synthetic prevention indicator exceeded 98% in all the years of the study, the total prevalence was around 5% and nosocomial prevalence did not reach 3% ¹⁰ .
2017	Martínez Valle	Spain		88	It was observed that from the sample to be studied, 51.1% were men. The mean age was 82.09 ± 5.2 years. The risk of developing PUs was: "high" in 7.6% of patients ⁸ .
2017	Sebastià et al.	Spain		668	Of the 98 PUs treated in our patients, 43 occurred outside the ICU and 55 in the unit itself ¹¹ .
2019	Latimer et al.	Australia	Intensive Care Unit, University Hospital of Araba	1.047	The prevalence of pressure ulcers at admission was 16%. Patients with PrU were older, more disabled, and had more complex conditions, including malnutrition and cognitive impairment. ¹³
2019	Chacón-Mejía, Del Carpio-Alosilla.	Mexico		93	It was noted that 113/1047 (10.8%) participants had a pressure injury within the first 36 hours of hospital admission. ¹²

The results obtained in the present study showed that the prevalence of pressure ulcers in hospitalized adult patients was 1.61%; however, when considering only the older adult population, it was observed that this prevalence increased to 7.43%. This prevalence is much lower in relation to other studies. Martín - Muñoz⁹, states that in hospital institutions in European countries when the therapeutic plan is not properly carried out, legal consequences are generated both for the institutions themselves and for the professionals. However, a great problem is observed in the people who suffer these injuries, since they affect the quality of life in a greater proportion in those patients who present grade III and IV injuries¹⁰. Meanwhile, Santaegúenia et al.¹¹ showed that the prevalence of pressure ulcers was 16%, where the patients were older and presented more complex conditions, which implies that the nursing staff should be aware of the characteristics of the patient, as well as the adequate use of material and human resources.

According to the World Health Organization (WHO), the worldwide prevalence of pressure ulcers is between 5 and 12% and in America, it is 7%. A study carried out in Spain indicated that 8.51% of adults included in-home care programs suffer from pressure ulcers; 13.41% in social-health centers¹²; and 7.87% in-hospital care. These figures soar in intensive care units where it reaches 18.50%¹³.

Table 2. Associated factors of pressure ulcers

YEAR	AUTHOR	COUNTRY	PLACE	POPULATION OF STUDY	ASSOCIATED FACTORS
2019	Valdez-Franco, Gonzales-Saldaña	Perú	Lima Hospital	14	Some factors associated with pressure ulcers included age, length of ICU stay, diabetes, duration of mechanical ventilation, or intermittent dialysis ⁴ .
2017	Carrasco-Peralta	Spain	Spain Clinic	12	Specific risk factors include prolonged exposure to pressure during long surgical procedures, vascular disease, and/or postoperative vasopressor use ¹⁴ .
2017	Lima Serrano, et al.	Spain	Care Unit in Spain	19.363	The risk factors that appeared most frequently associated with the development of pressure ulcers included: age, length of stay in ICU, diabetes, MAP time < 60-70 mmHg, mechanical ventilation, duration of mechanical ventilation, continuous venous hemofiltration therapy ⁵ .
2017	Garcia, et al.	Spain	Care unit in Spain	231	It was shown that patients with neurological diseases are prone to develop pressure ulcers due to sensory and motor deficits and that they also favor the appearance of derived complications such as fistulization ¹⁶ , and motor deficit and they also favor the appearance of derived complications such as fistulization ¹⁶ .

The factors associated with pressure ulcers in the elderly have become a topic of interest for different health disciplines since they imply social effects that directly affect patients and their families or caregivers, which translates into an increase in the burden of morbidity and mortality, an increase in health costs, as well as long and painful rehabilitation methods.

In studies conducted by Valdez et al.⁴, they conclude that skin changes in the elderly may be a major associated factor. There is clear evidence that mechanical forces, by pressure, rubbing, or deformation, of little extension are present in a short time, or “the presence of an excess of humidity in the exposed area, can generate definitive and severe lesions”. Other variables associated with the development of pressure ulcers in adults found in this study were: moderate and severe cognitive impairment, a functional level of partial or total dependence, moderate and high risk for pressure ulcer, the presence of urinary incontinence, as described in other studies¹⁴; in addition to the development of pneumonia as an in-hospital complication⁷.

The factors associated with the appearance of pressure ulcers increase if the patient is immobilized in a bed, if he/she uses a wheelchair or if he/she cannot change position; this type of injury is classified into four categories according to the tissue damage caused¹⁵. These categories are, category 1, “non-blanchable erythema”; category 2, “partial thickness”; category 3, “full-thickness skin loss”; category 4, “full-thickness tissue loss”; category unstageable, category “depth unknown”; and category suspected deep tissue injury, “depth unknown.” (Reference: National Pressure Ulcer Advisory Panel EPUAP, Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Perth, Australia: Cambridge Media Perth; 2014). Consequently, both localized and generalized infections can occur, causing a great impact on the life of the affected patients¹⁶.

Martínez-Duarte¹⁷, comments that pressure ulcers in the elderly represent an important public health problem due to the high percentage of people affected worldwide; they can also disturb health and quality of life, leading to disability or even death.

In this order of ideas, Alvarez et al.¹ argue that pressure ulcers are a public health problem worldwide because the appearance these extends hospital stays and increases the costs of the processes health system, in addition to this, it is stated that 95% of pressure ulcers can be avoided, with this it can be stated that much of this percentage is attributed to the deficit in the quality of care¹⁸.

As for the complications generated by pressure ulcers, at the hospital level, it is estimated that they affect nine out of every ten patients admitted, regardless of their age, and even generate a great impact on health systems, since their treatment entails a high cost. At the social level, they produce a significant deterioration in the quality of life, in addition to a great physical, the psychological, and economic impact that affects the patient and the family due to the workload

generated by the situation, causing a reduction in life expectancy¹⁹. García et al.²⁰ stated that it is necessary to broaden knowledge to bring to the nursing field the measures for prevention and care of pressure ulcers in older adults.

For timely hospital management, there must be health professionals who effectively accompany the patient, these professionals are the nurses. As expressed by Peris et al.³, the responsibility for the prevention of pressure ulcers is attributed to the nursing staff, being of vital importance not only to carry it out in the workplace, but the nursing team should educate family members and caregivers so that they can perform correct prevention of these injuries.

Naranjo et al.²¹ present the Dorothea Orem theory, where they argue that “this theory is used to support the process carried out by the nursing staff that includes the application of timely care in the treatment and prevention of pressure ulcers in older adults”. It is worth mentioning that specialized care involves both the patient and family members, who seek a common purpose, which is to achieve prompt recovery²². In specific terms, the scientific theory of self-care is focused on a general model made up of three theories that are related to each other, the theory of self-care, the theory of the self-care deficit, and the theory of nursing systems oriented to nursing practice, education, and management²³. In this regard, Rodríguez et al.²⁴ agree that nursing care requires varied skills to be able to adapt to the needs required by each patient, thus making care more creative and innovative to maintain and preserve life by meeting the needs of each one as an individual, family, and community. Therefore, the specific field of action of nursing is the prediction, prevention, and treatment of human responses²⁵.

Then the prevention of pressure ulcers can be effective if effective health strategies are met; this is under the expertise of health professionals, based on the constant rotation of patient positions. A low rate of occurrence of pressure ulcers is an indicator of good nursing care, but the prevention and treatment of pressure ulcers should involve the medical staff, the patient, and their families²⁶.

López et al.²⁷ indicate the necessary care when attending to a patient with pressure ulcers, especially when the patient is an older adult; the most ideal is to elevate the head of the bed as little as possible (maximum 30 degrees) during postural changes in supine and lateralized decubitus; perform postural changes every 3-4 hours in the population at risk of postural pressure ulcer. These activities also include performing postural changes every 2 hours on standard mattresses in the population at risk of PUs according to the assessment scale chosen²⁸.

Conclusions

Pressure ulcers represent an important health problem, in which not only patients and relatives are affected, but also create a great impact on the hospital system since the prevalence of pressure ulcers appears in considerable quantities. Prevalence ranging from 7.43% to 18.50% was observed, mostly in older adults, who presented more complex conditions at the time of admission to the hospital service.

The factors most frequently associated with the appearance of pressure ulcers were age, length of stay in the Intensive Care Unit (ICU), diabetes, duration of mechanical ventilation, continuous venous hemofiltration therapy, or intermittent dialysis. On the other hand, poor walking ability, inability to move independently, and the level of skin exposure to moisture are other factors associated with pressure ulcers.

We know that pressure ulcers can cause serious complications which can put the patient's life in danger, such as bone and joint infections and cellulitis, among the signs and symptoms that are evidence are heat, redness, and swelling of the affected area. Regarding the most effective treatments and nursing care, it is the nurses' responsibility to carry out education processes for constant updating and research process that allow the approach of each individual, family, and community holistically, with the appropriate techniques for the management of patients who develop this type of injury²³. Health education, as health promotion and disease prevention strategies that should be provided to health personnel and communities, plays a fundamental role in the care of pressure ulcers²⁶.

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