143 - RISK FACTORS FOR PRESSURE ULCERS: LITERATURA REVIEW

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INTRODUCTION

The pressure ulcer (PU) is a lesion on skin and underlying tissues, caused by a lack of blood supply due to the continuous pressure in a certain area (BERGSTROM; BENNET; CARLSON, 1995).

International studies show that between 3% and 14% of hospitalized patients develop PU, while in patients with chronic diseases, either in the community or in elderly asylums, the incidence is between 15 and 25% (LAZZARA; BUSCHAMANN, 1991).

For Backes, Guedes and Rodrigues (1999), all patients confined to bed for long periods, with motor and sensory dysfunction, with the use of sedatives, presence of edema, muscle atrophy and pad reduction, are prone to develop PU.

Several associated factors contribute to the emergence of PU, as age, nutritional status, diseases related to limited mobility, problems such as urinary and fecal incontinence, over-pressure, shear and friction on skin (BRADEN; BERGSTROM; LAGUZZA, 1987).

Therefore, the PU is caused by a combination of factors, being located internally or externally to the patient, but even if the individual is exposed to external factors, the human body does not automatically develops PU, as the determining factor comes from the patient himself (RANGEL, 2004; DEALEY, 2001; SILVA, 1998).

Silva (1998), Silva and Garcia (1998), Fernandes (2005) and Torres and Fernandes (2006), classify these factors as intrinsic (change in superficial sensitivity, turgor, elasticity, moisture, texture and body temperature alterations, evidenced bone prominence, total or partial physical impaired mobility and age equal or greater than 60 years) and extrinsic (body's pressure strength, shear strength, total or partial movement restriction, inappropriate mobility, inadequate mattress, inadequate conditions of bed linen and body hygiene).

Furthermore, these authors still add predisposing conditions for the occurrence of PU which are alterations related to metabolic, cardio-respiratory and neurological factors, chronic-degenerative diseases, nutrition, circulatory, hematological psicogenics and use of central nervous system (CNS) depressant drugs.

This study was designed to conduct a literature review on risk factors for pressure ulcer in the Latin American and Caribbean Literature on Health Sciences (LILACS) database, between 1999 and 2004.

METHODOLOGY

This is a study of literature review conducted in LILACS database until october/2007, being used as descriptors: “pressure ulcer” and “risk factors”. It were found 08 scientific productions published in the period of 1999 to 2004. As a criterion for inclusion, we used the researches that focused in its context, data on the risk factor for pressure ulcers, as Table 1.

Table 1. Main characteristics of the selected articles to the research.

AUTHORS	STUDY FOCUS	PLACE	PUBLICATION (YEAR)
Barros et al.	Identify the results of a protocol for PU prevention in critical patients in the intensive care unit	Paraná’s Northern Region University Hospital	Semina (2002)
Kochhann et al.	Determine the interface contents of pressure on flexible seat in patients with marrow lesions	SARAH/Salvador	Fisiatry Acta (2004)
Correia et al.	Determine which factors or aspects from the patient with marrow lesions contribute to the PU emergence	Santiago’s Worker Hospital Recovery Service	Chilean Security Association Scientific Bulletin (1999)
Faro	Identifying the PU risk factors patients with marrow lesions using nurses registers and NANDA’s Taxonomy I	Government institution at São Paulo	USP Nursing School Magazine (1999)
Ourcilleón et al.	Identify the risk factors for UP occurence	Clinical Hospital of Chile Pontific Catholic University	Intensive Medicine Chilean Magazine (2004)
Bellón and Torres	Identify the PU risk factors for hospitalized children	Mercy Hospital in Chile	Arquichan (2004)
Verástegui	Identify the risk factors for PU occurence	Cayetano Heredia National Hospital at Peru	Bol. Soc. Peru. Med. Interna (2000)

RESULTS

Identify the results of a protocol for PU prevention in critical patients in the intensive care unit of Paraná's Northern Region University Hospital, 57% were considered at risk of developing PU. Of these, 41% showed changes in the skin, while being daily evaluated based on the Protocol for PU prevention. Of the patients who had changes in the skin, 100% had hemoglobin values below 10g/dl and needed to receive blood transfusion (Barros et al, 2002).

The study develoed in SARAH / Salvador shows that 82% of individuals with marrow lesions that earlier reported pressure ulcers, had pressure peaks greater than 200 mmHg ($p < 0.001$). Scores above 200 mmHg occur in most paraplegic and quadriplegic individuals evaluated in the study. 10.9% of not harmed subjects and 32.0% of marrow injured had low weight. Lesions in the isquiatic region, frequently in individuals with cronical marrow lesions, were shown in only 13%, however is another risk factor, because the region where ulcers are healed does not have the same tolerance to pressure (KOCHHANN et al. , 2004).

Still in a research with patients with medullary lesion, Correia et al. (1999) detected some risk factors for PU development: age greater than 40 years, complete marrow damage, chest level of marrow injury, injury time over 5 years, ankle edema, loss of a stable partner, smoking habit, incontinence, spasticity, a history of more than 5 prior ulcers, organic-cerebral deterioration, anxiety, depression, personality disorders, family relationships and sex, alcohol, labor inactivity and social interaction disorders.

On an government institution of assistance to marrow injured patients, at Sao Paulo, were also studied the PU risk factors. Of the 38 patients studied, 100% showed changes of sensitivity and motricity, 71.1% urinary incontinence, 7.9% turgor alterations and changes in skin elasticity (dry skin), and 2.6% had a prior history of pressure ulcer and flictema in bone prominence region (FARO, 1999).

Bellón and Torres (2004) conducted a quantitative study with 133 patients admitted in the pediatric ICU of Mercy Hospital Foudation in Columbia, where 36% of the patients had a high risk of pressure ulcers and 64%,f medium risk, according to Braden scale. In these patients, was detected decreased sensory perception, immobility and decreased activity, induced by treatment with drugs that cause sedation, muscle relaxation and analgesia.

In a study with 124 patients aged equal or greater than 60 years admitted in Infectology and Medicine services and the Cayetano Heredia National Hospital, in Peru, noted that 42.7% had PU risk in hospital admission and of these, 29.0% had high risk. Of those who had high risk for PU, 63.2% had more than 85 years (RC = 0.6836) (VERÁSTEGUI, 2000).

In the same study, the patients at risk for UP, 100.0% had more than 10 diagnoses (RC = 0.7809), 66.7% had some degree of immobility, 54.7% were dependent on their activities of daily life , 42.9% were poorly nourished, 42.9% with presence of cognitive deterioration, and 36.2% had some degree of depressive disorder (VERÁSTEGUI, 2000).

Nogueira, Caliri and Santos (2002), a research developed at the Ribeirão Preto Clinical Hospital aimed to identify risk factors for PU on nursing staff perception.

Ourcilleón et al. (2004) say there are intrinsic and extrinsic risk factors to the pressure ulcer. Among the internal factors highlight the neurological changes, the decrease in consciousness level, biochemical changes, age extreme, chronic diseases (diabetes mellitus), cases of hypotension or hyperthermia. And as external factors, can mention shear, friction, poor hygiene, inadequate mattress, innadequate bed linen or on pajamas. We still, that the patients in critical state of health, usually have multiple risk factors for PU development.

DISCUSSION

Baumgarten et al. (2004) show the deficiency in the nutritional status, comorbidities, immobility and fecal incontinence as the factors most associated to the PU presence. According Young et al. (2002), several international studies identified the immobility, excretion inability, poor nutrition, low score in Braden's, patient's acuity, comorbidities, gender, stay length in hospital, emergency admission and age as risk factors for the development of PU.

The age, mobility, mental condition, friction and shear were significant in the risk assessment for PU occurrence in the research of Perneger et al (2002), the mental condition and mobility, with a lesser significance, while the age, shear and friction strength with greater significance.

Backes; Guedes; Rodrigues (1999) say that patients confined in bed for a long period, with edema, motor and sensory dysfunction, use of sedatives, muscle atrophy and pad reducing, are more likely to develop PU. To Fernandes; Braz (2002), the most frequent risk factors in PU patients are: infectious foccus, anemia, nutritional deficiency, impaired mobility, decreased sensory perception, increased humidity, edema and hyperthermia.

In studies of Fernandes (2005) and Fernandes and Torres (2006), we found an association of 17.3% ($p = 0.0384$ RC = 4.6) between the predisposing conditions (anemia, leukocytosis and hypotension), intrinsic factors (age equal or greater than 60 years, reduced/absent pain sensitivity and smooth, thin or delicate skin) and extrinsic factors (mattress thickness <13 cm, mattress inappropriate for density and time of use, presence of rubbish areas and / or marks - forces of pressure, strength, shear / friction, in the same decubitus position for more than two hours, lifting 30 to 45 degrees and inappropriate bed linen conditions - folds leaving marks on the body).

CONCLUSIONS

Although most researched authors does not explicit the classification for PU risk factors in intrinsic and extrinsic, we can see that the alterations provided the occurrence of these injuries are external and internal to the patient and also there are other predisposing conditions that cause changes in individuals and end with the PU occurrence.

In our review of the main internal factors, we found skin changes, advanced age, edema, marrow injury situation, changes in sensitivity and motricity, flictema in bone prominence region, and patient dependence.

Among the external factors, are highlighted shear, friction, poor hygiene, inadequate mattress, rugosity in bed linen or pajamas. The conditions predisposing we most found were anemia, depression, personality disorders, anxiety, low weight, use of sedatives.

This work reinforces the review importance to investigate the influence of the multiplicity of factors and conditions that increase the risk for PU, with a view to contributing to the prevention and reduction of complication, favoring, thus, reducing the time of hospitalization, physical and psychological suffering, and the possibility of improving the clinical status of the patient.

Thus, we understand that to provide a quality and integral assistance, based on the holistic concept, we have to bear in mind that many are the elements that can trigger the occurrence of PU, not depending, therefore, only to the care provided by the multi professional team, but also the identification of several factors that interact with each other, among which are those related to patients and the institution itself, as a condition provider for the heatlhcare assistance.

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RISK FACTORS FOR PRESSURE ULCERS: LITERATURA REVIEW

ABSTRACT

The pressure ulcer (PU) is a lesion on skin and underlying tissues, caused by a lack of blood supply due to the continuous pressure in a certain area. The PU is caused by a combination of factors, being located internally or externally to the patient, but even if the individual is exposed to external factors, the human body does not automatically develops PU, as the determining factor comes from the patient himself In addition, there are predisposing conditions for the occurrence of PU. This study was designed to conduct a literature review on the risk factors for pressure ulcers in the LILACS database, between 1999 and 2004. So, a research was developed in scientific articles papers until until october/2007, using as descriptors: “pressure ulcer” and “risk factors”. The main internal factors found were skin changes, advanced age, edema, marrow injury situation, changes in sensitivity and motricity, flictema in bone prominence region, and patient dependence. Among the external factors, are highlighted shear, friction, poor hygiene, inadequate mattress, rugosity in bed linen or pajamas. The conditions predisposing we most found were anemia, depression, personality disorders, anxiety, low weight, use of sedatives. This work is important to investigate the influence of the multiplicity of factors and conditions that increase the risk for PU, with a view to contributing to the prevention and reduction of complication.

KEYWORDS: Pressure Ulcer, Risk Factors, Hospital.

À DES FACTEURS DE RISQUE POUR DES ULCERES DE PRESSION: EXAMEN DE LA DOCUMENTATION

RÉSUMÉ

L'ulcère de pression (UP) est une lésion de la peau et des tissus sous-jacents, causée par un manque d'approvisionnement en sang en raison de la pression continue dans une certaine zone. L'UP est causée par une combinaison de facteurs, peuvent être situées à l'intérieur ou l'extérieur, de la patience, mais même si l'individu est soumis à des facteurs extérieurs, le corps humain ne développe pas automatiquement UP, comme le facteur déterminant vient du patient lui-même. En outre, il existe prédisposant conditions de la survenance d'UP. Cette étude visait à réaliser une étude de la littérature sur les facteurs de risque pour l'ulcère de pression dans la base de données LILACS entre 1999 et 2004, des opérations de recherche

ont été réalisés dans les articles scientifiques jusqu'à October/2007, en utilisant comme descripteurs de l'escarre et les facteurs de risque. Les principaux facteurs qui ont été trouvés changements internes de la peau, l'âge avancé, le gonflement, la table des blessures moelle, les changements dans la sensibilité et la motricité, les bulles dans la région de proéminence osseuse, la dépendance du patient. Parmi les facteurs externes sont mis en évidence de cisaillement, la friction, le manque d'hygiène, le manque de matelas, de la rugosité En pyjama ou des draps. Et pour les conditions de prédisposition a été l'anémie, la dépression, troubles de la personnalité, l'anxiété, faible poids, l'utilisation de sédatifs. Ce travail est important d'étudier l'influence de la multiplicité des facteurs et des conditions qui augmentent le risque de UP, dans le but de contribuer à la prévention et la réduction des complications.

MOTS CLÉS: Pression Ulcération, Facteurs de risque, Hospital.

FACTORES DE RIESGO PARA LA ÚLCERA DE PRESIÓN: REVISIÓN DE LITERATURA

RESUMEN

La úlcera de presión (UP) es una lesión de la piel y de los tejidos subyacentes, provocada por la carencia de suministro de la sangre debido a la presión continua en determinada zona. La UP es causada por una combinación de factores, pudiendo ser situado externamente o internamente al paciente, pero mismo que el individuo estea sujeto a factores externos, el cuerpo humano no desarrolla automáticamente UP, pues el factor determinativo viene del proprio paciente. Por otra parte, las condiciones predisponentes para la ocurrencia de UP todavía existen. Este estudio objetivó realizar una revisión de la literatura acerca de los factores de riesgo para la úlcera de presión en la base de datos LILACS entre 1999 y 2004, para esto fue hecha una investigación en artículos científicos hasta octubre/2007, utilizando como descriptores la úlcera de presión y factores de riesgo. Los principales factores internos encontrados fueron alteraciones de la piel, edad avanzada, edema, cuadro de lesión medular, alteraciones de la sensibilidad y motricidad, flictena en la región de prominencia ósea, dependencia del paciente. Entre los factores externos hubo destaque para fricción, higiene precaria, colchón inadecuado, rugosidades en las ropas de cama o pijama. Y como condiciones predisponentes hay anemia, depresión, agitaciones de la personalidad, ansiedad, peso bajo y uso de sedativos. Este trabajo tiene como objetivo investigar la influencia de multiplicidad de factores y las condiciones que aumentan el riesgo de la ocurrencia de UP, con el fin de contribuir con la prevención y la reducción de esta complicación.

PALABRAS-CLAVE: Úlcera de presión, factores de riesgos, hospital.

FATORES DE RISCO PARA ÚLCERA DE PRESSÃO: REVISÃO DE LITERATURA

RESUMO

A úlcera de pressão (UP) é uma lesão da pele e dos tecidos subjacentes, provocada pela falta de suprimento sangüíneo devido à pressão contínua em determinada área. A UP é causada por uma combinação de fatores, podendo estar situados externamente ou internamente ao paciente, porém mesmo que o indivíduo esteja sujeito a fatores externos, o corpo humano não desenvolve automaticamente UP, pois o fator determinante vem do próprio paciente. Além disso, existem ainda as condições predisponentes para a ocorrência de UP. Este estudo teve por objetivo realizar uma revisão de literatura sobre fatores de risco para úlcera de pressão na base de dados da LILACS entre 1999 e 2004, para isso foi feita uma pesquisa em artigos científicos até outubro/2007, utilizando como descritores úlcera de pressão e fatores de risco. Os principais fatores internos encontrados foram alterações da pele, idade avançada, edema, quadro de lesão medular, alterações de sensibilidade e motricidade, flictema em região de proeminência óssea, dependência do paciente. Dentre os fatores externos destacaram-se cisalhamento, fricção, higiene precária, colchão inadequado, rugosidades nas roupas de cama ou pijamas. E para as condições predisponentes tem-se anemia, depressão, transtornos de personalidade, ansiedade, baixo peso, uso de sedativos. Esse trabalho tem a importância de investigar a influência da multiplicidade de fatores e condições que aumentam o risco de ocorrência de UP, na perspectiva de contribuir com a prevenção e diminuição dessa complicação.

PALAVRAS-CHAVES: Úlcera de Pressão, Fatores de Riscos, Hospital.