

## 98 - RISK FACTORS FOR PRESSURE ULCER IN ELDERLY PATIENTS HOPITALIZED IN INTENSIVE CARE UNIT

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### INTRODUCTION

The pressure ulcers (PU) are defined like skin or soft-tissue wounds, in the superficial or in the deep part, of etiology in the tissue ischemia, secondary to an increase of external pressure, and located in bone prominences bone notoriety (BLEGEN, 2006). Those wounds even imply, in so much social, emotional, and physical overloads for the patient and his family, reducing quality of life, beyond increase of the costs to the service of health and of the period of hospitalization (SOUZA; SANTOS, 2007).

The diagnosis is made by means of visual approaches that classify the stages of a pressure ulcer, this is important in the elaboration of therapeutic strategies (WHITTINGTON; BRIONES, 2004).

Like this, the PU are utilized like indicator of the quality of the nursing care (FERREIRA; CALIL, 2001). The predominance of PU is elevated in hospitalized patients (GUNNINGBERG; STOTTS, 2008), despite of the increase of the awareness of the clinical and economic impact of those wounds (LYDER; VAN RIJSWIJK, 2005).

The pathological trials that result the PU begin after some hours of immobility, prompted by pressure about bone notoriety (DEFLOOR; DE BACQUER; GRYPDONCK, 2005). There is a broad margin of patients that remain in the hospital, for periods of immobility that they are long sufficient for increase in elderly patients the pressure ulcer risk. In sectors of emergency, the patients can relapse about stretchers for many hours waiting exams, treatments, or transference (BERGSTROM et al, 1994).

Of the same way, medications that cause sedation can result in long periods of immobility (BRESSLER; BAHL, 2003). In the Intensive Care Unit (ICU), the patients can be unconscious, immobilized for significant periods of time.

Even if it have had numerous studies of inherent characteristics of the patient (such as the reduction of the muscular force, immobility, loss of sensibility, nutrition status and incontinence) regarding the of risk PU, for example (NIXON, 2001), little knows about the impact of extrinsic factors (EF). These factors are defined like the procedures and events, that can contribute for the risk of UP because they involve periods related with the pressure and immobility. In addition, the extrinsic factors include friction associated with moisture (SOUZA; SANTOS, 2007).

The understanding of the providers of care about the influence of those EF and its association in the occurrence of UP can be possible the reduction of the risk of that wound of from the behavior change in the cares of health (BAUMGARTEN et al, 2008).

The UP can occur in all of the age groups, but as the senility is one of the inherent factors, there is a private problem with elderly persons that live in a range of conditions, what associates with a significant increase of the morbidity (SOUZA; SANTOS, 2007; REDDY; GILL; ROCHEON, 2006). The identification of UP and his risks is an important component of preventive cares in the elderly (KEELAGHAN et al, 2008).

This study was designed to identify the risk factors involved in the sprouting of PU in elderly patients hospitalized in Intensive Care Unit of two hospitals, a private and a public of the town of Natal/RN.

### METHODOLOGY

This is a descriptive study with longitudinal delineation, with quantitative approach. The population aim of the study was composed for 41 elders that were interned in the Intensive Care Unit of the private hospital during the period of May to July of 2005 and of December of 2007 to February of 2008 in the public hospital.

The study was approved by the Committee of Ethics of the HUOL/UFRN (Resolution 196/96). The collection of data was carried out by a structured form of observation, register book and physical exam of the skin of the patients. The data were organized in the program SPSS 15,0, controlled, categorized and analyzed by means of descriptive statistics and inferential.

### RESULTS AND ARGUMENT

Was researched 41 elderly patients, of the which 51.2% were of the female sex and 48.8% of the male sex.

Developed PU, 51.2% of the patients. Of these, 76.2% they presented association of more of 3 predisposing conditions. Nogueira, Caliri and Haas (2006) found 42.5% of development of PU.

Of the patients that developed PU, 100.0% presented hematologic alterations and 81.1% cardiac respiratory. The hematologic alterations occur when the patient presents diminution of the levels of hematocrit.

and hemoglobin (red cells), which decreases, consequently, the capacity of the transport of oxygen and the tolerance tissue (SILVA; GARCIA, 1998; COSTA, 2003). The cardiac respiratory alterations caused by certain pathologies, contributing for the sprouting of PU (Silva, 1998). Souza and Santos (2007) found in his research with the majority (57.4%) of the elders with alterations cardiac respiratory.

Of the total of 14.6% of patients that presented degenerative chronic illnesses, 67.1% developed UP. Already of the patients with alterations psychogenic (12.2%), 78.4% presented the wound. His main consequences embody the sprouting of anorexia, fatigue, loss of the sleep, compromise of the mobility, leading the patient to a rest more prolonged (SILVA, 1998).

Between the patients that developed UP (51.2%), 76.2% presented the association of more of 5 inherent factors ( $p=0.058F$ ), being that, 100% presented alteration in the texture of the skin, 95.3% physical mobility injured total, 85.7% superficial sensibility altered, 85.7% alteration in the humidity of the skin. Those numbers elevated are associated to the fact of that with the advancement of the age, numerous changes are observed in the skin, between them the diminution of the layer dermal, of her one vascularization, of the proliferation epidermal and of her estates as the perception of the pain, the inflammatory answer and the function of barrier, becoming it more vulnerable to the offenses (MULDER, 1990).

Of the patients researched, 57.2% presented notoriety bony prominences that in bedridden patients, with little muscle mass, emaciate, becomes them more vulnerable the occurrence of UP (JORGE, 2003).

Of the total of 46.4% of patients that presented regions edemaciadas, 73.7% developed UP ( $p=0.012$ ). The a research about protocol for avoid UP in INTENSIVE CARE UNIT, 58% of the patients with risk for UP presented edema (BARROS et al, 2002).

As regards the extrinsic factors, 76.2% of the patients presented the association of more of four factors of the total of 51.2% that developed UP. Of these, 100.0% they presented the elevation of the head and inadequate mobilization, 95.3%

presented force of cisalhamento/friction ( $p=0,045f$ ), 90.4% conditions of inadequate bedding and 76.2% forces of pressure in the body. Of the total one (7,3%) of patients that presented total movement restriction, 100.0% developed UP. One of the main causes of shear is presented when the patient is lying down with their backs supported on the bed head, favoring the sliding and causing the skin folds. It is considered like a capable force of destroy the fabric, beyond damage the blood vessels.

Stands out the importance of the patient remain sat down in a seat, what injures to his posture, This constituted an important factor of risk in the development of the PU (COSTA, 2003; JORGE; DANTAS, 2003; DEALEY, 2001; SILVA, 1998; BRYANT et al., 1992).

As regards the location of the wounds in the sick, 57.1% developed in the region sacral, 28.6% in the calcaneus, similar information to the finds of MORO et al (2007), Nogueria, Caliri and Haas (2006) and Carcinoni, Caliri and Birth (2005), that obtained to bigger incidence of PU in the region sacral followed by the calcaneus, and to the of Acuna et Al (2007), with 100% of incidence of PU in the region sacral. In addition these locations, 4.8% of the PU developed in the ear, 4.8% in the region sacral, trochanteric and ear and 4.8% in the elbow. In what the time of admission concerns, of the total one (17,1%) of patients that stayed interned more of 15 days, 71.3% developed UP, similar fact was found in a research, in that on average of sprouting of PU in ICU was of 10 days (MORO etAl, 2007).

## CONCLUSION

Of the elderly researched, approximately the half developed pressure ulcer and of those, the majority presented association of more of 3 predisposing conditions, more of 5 intrinsic factors and more of 4 extrinsic factors. Faced of the expost, we observe that have an association between the conditions predisposing, extrinsic and intrinsec factors in the occurrence of PU in the patients researched.

The association found denotes the importance of search information of the influence of the multiplicity of factors and conditions that increase the risk of occurrence of PU in the perspective of contribute with the prevention and diminution of his complications, favoring, like this, the reduction of the time of admission, of the psychological and physical suffering of the hospital costs and improves of the clinical state of the patient.

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**RISK FACTORS FOR PRESSURE ULCER IN ELDERLY PATIENTS HOSPITALIZED IN INTENSIVE CARE UNIT**

**ABSTRACT**

The pressure ulcers (PU) are skin lesions of the soft parts, superficial or deep part, of etiology ischemic, secondary to an increase of external pressure. His predominance still is elevated in patients hospitalized and can occur in all of the age groups, but in private with elderly persons that live in a range of conditions. The identification of UP and his risks are important for its prevention in the elderly population. The objective of that study is, then, identify the factors of risk involved in the sprouting of UP in elderly patients hospitalized in Intensive Care Unit (ICU) in a private hospital and a public of the town of Christmas/RN. Treats-itself of a descriptive study with longitudinal delineation and quantitative approach with population 41 elderly boarding in ICU. The facts were collected after approval by the Committee of Ethics of the HUOL/UFRN (RESOLUTION 196/96) being carried out on the basis of form structured, obtaining of facts of the manuals and physical exam of the skin of the patients. Of the 41 patients researched, 51.2% were of the female sex and 51.2% developed UP. Of those who develop PU, 76.2% presented association of more of 3 predisposing conditions, 76.2% presented the association of more of 5 inherent factors and 76.2% association between more of four extrinsic factors. As regards the location of the wounds, 57.1% developed in the region sacral and 28.6% in the calcaneo. We observe that exists an association between the predisposing conditions, extrinsic and inherent factors in the occurrence of UP in the sick elderly, what is done Important seek information of the influence of the multiplicity of factors and conditions that increase the risk of occurrence of UP, in the perspective of contribute with the prevention and diminution of its complications.

**Keywords:** pressure ulcer, risk factors, hospital care, aged.

**FACTEURS DE RISQUE POUR ETABLIR DES PLAIES DE PRESSION CHEZ LES PATIENTS AGÉS HOSPITALISÉS AUX SOINS INTENSIFS**

**ABSTRACT**

Les ulcères de pression (UP) sont des lésions de la peau des tissus mous, superficielle ou profonde, d'étiologie ischémique, secondaire à une augmentation de la pression extérieure. Sa prévalence est encore élevé dans les hôpitaux et peut se produire dans tous les groupes d'âge, mais particulièrement avec les personnes âgées vivant dans une variété de conditions. L'identification de l'UP et de ses risques sont importants pour la prévention de cette maladie dans la population âgée. L'objectif de cette étude est d'identifier les facteurs de risque impliqués dans l'accident de l'UP chez les patients âgés hospitalisés dans les unités de soins intensifs (ICU) dans un hôpital privé et un public de la ville de Natal / RN. Il s'agit d'une étude descriptive longitudinale à la conception et approche quantitative de la population cible de 41 personnes âgées hospitalisées en soins intensifs. Les données ont été recueillies après l'approbation par le comité d'éthique de HUOL / UFRN (Résolution 196/96) étant effectuée sur la base de la forme structurée, l'obtention de données de dossiers médicaux et l'examen physique de la peau des patients. Sur les 41 patients étudiés, 51,2% étaient des femmes et 51,2% ont développé UP. Parmi ceux qui ont développé UP, 76,2% ont montré une association de plus de 3 conditions prédisposantes, 76,2% ont montré une association de plus de 5 facteurs intrinsèques et 76,2% d'association entre plus de quatre facteurs extrinsèques. Comme l'emplacement des lésions, 57,1% ont développé dans la région sacrale et 28,6% dans le calcaneus. Nous avons remarqué qu'il existe une association entre les conditions de prédisposition, facteurs intrinsèques et extrinsèques à l'accident de l'UP chez les patients âgés, ce qui est important de recueillir les renseignements de l'influence de la multiplicité des facteurs et des conditions qui augmentent le risque de l'UP, en vue de contribuer à la prévention et la réduction de ses complications.

**Mots clés:** ulcère de pression, les facteurs de risque, soins de l'hôpital, personnes âgées.

**FACTORES DE RIESGO PARA ESTABLECER LAS ÚLCERAS POR PRESIÓN EN PACIENTES ANCIAÑOS HOSPITALIZADOS EN LA UCI**

**RESUMEN**

Las úlceras de presión (UP) son lesiones en la piel de los tejidos blandos, superficial o profunda, de etiología isquémica, secundaria a un aumento de la presión externa. Su prevalencia sigue siendo alta en pacientes hospitalizados y puede ocurrir en todos los grupos de edad, pero especialmente con las personas de edad avanzada que viven en una variedad de condiciones. La identificación de la UP y sus riesgos son importantes para su prevención en la población de edad avanzada. El objetivo de este estudio es identificar los factores de riesgo implicados en la aparición de la UP en pacientes ancianos hospitalizados en unidades de cuidados intensivos (UCI) en un hospital privado y uno público de la ciudad de Natal / RN. Es un estudio descriptivo, longitudinal con diseño y enfoque cuantitativo a la población de 41 ancianos hospitalizados en la UCI. Los datos fueron recogidos después de la aprobación por el Comité de Ética de HUOL / UFRN (RESOLUCIÓN 196/96) que se están realizando sobre la base de forma estructurada, la obtención de datos de registros médicos y examen físico de la piel de los pacientes. De los 41 pacientes estudiados, el 51,2% fueron mujeres y el 51,2% desarrolló UP. De los que desarrollaron UP, el 76,2% mostró una asociación de más de 3 condiciones predisponentes, el 76,2% mostró una asociación de más de 5 factores intrínsecos y 76,2% más de cuatro asociación entre factores extrínsecos. Como la ubicación de las lesiones, 57,1% en los desarrollados región sacra y 28,6% en el calcáneo. Hemos observado que existe una asociación entre las condiciones predisponentes, intrínsecos y extrínsecos factores en la aparición de la UP en pacientes de edad avanzada, lo que es importante recabar información de la influencia de la multiplicidad de factores y condiciones que aumentan el riesgo de UP, con miras a contribuir con la prevención y la reducción de sus complicaciones.

**Palabras clave:** úlcera de presión, los factores de riesgo, hospital, de edad avanzada.

**FATORES DE RISCO PARA ÚLCERA DE PRESSÃO EM PACIENTES IDOSOS HOSPITALIZADOS EM UTI**

**RESUMO**

As úlceras de pressão (UP) são lesões cutâneas de partes moles, superficiais ou profundas, de etiologia isquêmica, secundária a um aumento de pressão externa. Sua prevalência ainda é elevada em pacientes hospitalizados e podem ocorrer em todos os grupos etários, mas em particular com pessoas idosas que vivem em uma variedade de condições. A identificação de UP e seus riscos são importantes para sua prevenção na população idosa. O objetivo desse estudo é, então, identificar os fatores de risco envolvidos no surgimento de UP em pacientes idosos hospitalizados em Unidades de Terapia Intensiva (UTI) em um hospital privado e um público do município de Natal/RN. Trata-se de um estudo descritivo com delineamento longitudinal e abordagem quantitativa com população alvo de 41 idosos internados em UTI. Os dados foram coletados após aprovação pelo Comitê de Ética do HUOL/UFRN (RESOLUÇÃO 196/96) sendo realizada com base em formulário estruturado, obtenção de dados dos prontuários e exame físico da pele dos pacientes. Dos 41 pacientes pesquisados, 51,2% eram do sexo feminino e 51,2% desenvolveram UP. Dos que desenvolveram UP, 76,2% apresentaram associação de mais de 3 condições predisponentes, 76,2% apresentaram a associação de mais de 5 fatores intrínsecos e 76,2% associação entre mais de quatro fatores extrínsecos. Quanto à localização das lesões, 57,1% desenvolveram na região sacral e 28,6% no calcâneo. Observamos que existe uma associação entre as condições predisponentes, fatores intrínsecos e extrínsecos na ocorrência de UP nos pacientes idosos, o que se faz Importante buscar informações da influência da multiplicidade de fatores e condições que aumentam o risco de ocorrência de UP, na perspectiva de contribuir com a prevenção e diminuição de suas complicações.

**Palavras-chaves:** úlcera de pressão, fatores de risco, assistência hospitalar, idoso.