BRADEN SUBSCALES ANALYSIS AS INDICATIVE OF RISK FOR PRESSURE ULCER

Dóris Baratz Menegon[1], Rossana Rosa Bercini[2], Cássia Teixeira dos Santos [3], Amália de Fátima Lucena[4], Ana Gabriela Silva Pereira[5], Suzana Fiore Scain [6]

[1] Master on Medical Sciences. Nurse of the Public Health Service at the Hospital de Clínicas de Porto Alegre (HCPA). Rio Grande do Sul, Brazil. E-mail: dmenegon@hcpa.ufrgs.br
[2] Nurse of the Public Health Service at the HCPA. Rio Grande do Sul, Brazil. E-mail: rbercini@hcpa.ufrgs.br
[3] Master´s Degree Student of the Nursing Grade School Program at the Federal University of Rio Grande do Sul (UFRGS). Rio Grande do Sul, Brazil. E-mail: cassia.teixeira87@hotmail.com
[4] Doctor in Sciences. Associate Professor of the Nursing School and the Grade Program at UFRGS. Rio Grande do Sul, Brazil. E-mail: afatimalucena@gmail.com
[5] Nurse. Rio Grande do Sul, Brazil. E-mail: gabisnalda@gmail.com
[6] Doctor in Endocrinology. Nurse of the Nursing Service in Public Health at the HCPA. Rio Grande do Sul, Brazil. E-mail: scain@hcpa.ufrgs.br

ABSTRACT: Cross-sectional study that aimed to identify subscales scores that evaluate the risk for pressure ulcer in the implementation of the Braden Scale, and associate them with reasons for hospitalization, comorbidities and demographic characteristics of the hospitalized adult patients. The sample consisted of 187 patients at risk for pressure ulcer with a total score ≤13 on that scale. Data were collected retrospectively in the sheets with the Braden Scale and medical records, analyzed by descriptive statistics and tests of Mann-Whitney and Spearman. The results showed majority of women and elderly with cerebral, pulmonary, cardiovascular, metabolic and cancer diseases. The scores verified by the subscales indicated bedfast patients with limited mobility and activity. The altered nutrition was also an important factor, followed by the problems of friction and/or shearing, alteration of sensory perception and moisture. These findings allow us to support the prevention qualification of pressure ulcer.

DESCRIPTORS: Pressure ulcer. Nursing care. Protocols.

ANÁLISE DAS SUBESCALAS DE BRADEN COMO INDICATIVOS DE RISCO PARA ÚLCERA POR PRESSÃO

RESUMO: Estudo transversal com objetivo de identificar a pontuação das subescalas que avaliam o risco para úlcera por pressão na aplicação da Escala de Braden e associá-las aos motivos de internação hospitalar, às comorbidades e às características demográficas de pacientes adultos hospitalizados. A amostra constou de 187 pacientes em risco para úlcera por pressão com escore total ≤13 na referida escala. Os dados foram coletados retrospectivamente em fichas com a Escala de Braden e em prontuários, analisados pela estatística descritiva e testes de Mann-Whitney e Sperman. Os resultados demonstraram maioria de mulheres, idosos, portadores de doenças cerebrovasculares, pulmonares, cardiovasculares, metabólicas e neoplásicas. Os escores verificados pelas subescalas apontaram pacientes acamados, com mobilidade e atividade limitadas. A nutrição alterada também se mostrou fator importante, seguido pelos problemas de fricção e/ou cisalhamento e alteração da percepção sensorial e umidade. Estes achados permitiram subsidiar a qualificação da prevenção da úlcera por pressão.

DESCRITORES: Úlcera por pressão. Cuidados de enfermagem. Protocolos.

ANÁLISIS DE LAS SUBESCALAS BRADEN COMO INDICATIVO DE RIESGO PARA LAS ÚLCERAS POR PRESIÓN

RESUMEN: Estudio transversal con objetivo de identificar la puntuación de sub escalas que evalúan el riesgo para la úlcera por presión en la aplicación de la Escala de Braden, y asociarlas a los motivos de hospitalización, comorbilidades y características demográficas de pacientes adultos. La muestra fue de 187 pacientes con riesgo de úlcera por presión con un puntaje total ≤13 en la referida escala. Los datos fueron recolectados retrospectivamente en fichas que contiene la Escala de Braden y en los registros médicos, analizados por estadística descriptiva y test de Mann-Whitney y Spearman. La mayoría eran mujeres, ancianos, con enfermedades cerebrovasculares, pulmonares, cardiovasculares, metabólicas y cáncer. Los puntajes verificados por las sub escalas apuntaron pacientes con movilidad y actividad limitadas, nutrición alterada, problemas de fricción, alteración de la percepción sensorial y humedad. Estos resultados nos permiten apoyar la calificación de la prevención de úlceras por presión.

DESCRIPTORES: Úlcera por presión. Atención de enfermería. Protocolos.

INTRODUCTION

Pressure ulcer (PU) is defined as an injury in the skin and/or underlying tissue, usually over a bony prominence, as a result of pressure, pressure in combination with shear and/or friction. In addition to these factors, there are others such as nutritional condition and moisture to which the patient is exposed. However, its significance still needs to be further elucidated.[1]

The etiology of PU is related to extrinsic and intrinsic risk factors to the patient. Extrinsic factors are pressure, friction, shear and moisture. The association of friction, shear and moisture worsen this condition.[2-3]

Intrinsic factors are diverse in relation to the PU emergence. Acute diseases lead to increase metabolic rates and oxygen consumption, which compromises the tissues. On the other hand, advanced age might lead to the onset of chronic diseases, cerebral vascular accident (CVA), inadequate nutrition, restricted to bed or wheelchair, urine and/or fecal incontinence and hip fracture. These situations increase the risk for PU development.

It is also provoked through changes in the level of consciousness caused by acute or chronic disease and the use of analgesic, sedative or anesthetic medications that may compromise sensitivity. Limitations of mobility or immobility caused by several factors such as stroke sequel, orthopedic problems, arthritis, terminal diseases, vascular diseases, malnutrition or dehydration and previous history of PU are also important and intrinsic contributing factors to increase the risk for this type of injury.[4-5]

PU increases hospitalization time, treatment cost and worsens the life quality of hospitalized patients.[6] Most of the times, it is a preventable problem and, therefore, it became imperative the reassessment of care processes provided by the staff of a University Hospital in southern Brazil, which uses an assistance protocol for PU prevention and treatment.

This is based on the risk assessment through the Braden Scale, which consists of six subscales: sensory perception (ability for responding to the pressure - related to discomfort); moisture (level at which the skin is exposed to humidity); activity (degree of physical activity), mobility (ability to control the position of the body); nutrition (usual pattern of food consumption); friction (when two surfaces come into friction with one another) and shear (the patient slides into bed – skeleton and closer tissues move, but the skin remains motionless).[7]

Each subscale presents four punctuation levels, numbered from one to four, with the exception of friction and shear that have three levels. The total sum of these items shows the numerical risk to the lesion´s development, the lower the score the greater the risk of PU. The minimum score on this scale is 6 and the maximum 23. The risk classification is defined by the cutting points that are: ≤9 very high risk, between 10 and 12 high risk, between 13 and 14 moderate risk, between 15 and 18 mild risk and above this value with no risk.[8-10]

The total score ≤13 was considered as the cutoff point to define the patient risk and also indicates the nursing conduct to be adopted for the lesion´s prevention,[11] at the institution where this study was developed.

It is known that risk assessment is the first step on PU prevention, because it provides for nurses the possibility of gathering important information to identify patients with greatest vulnerability and, from this, to plan more appropriate care.[12] In order to make this evaluation more reliable, it is quite essential to use an instrument for risk measurement.[12] Thereby, the application of the referred protocol, at the hospital, provided subsidies for nurses to identify the patients at risk that were hospitalized at the institution. However, the team did not know yet other factors associated with PU, in this group of patients at risk, and with the total score ≤13 in the Braden Scale application. Added to this, it was questioned the fact on evaluating patients with this scale and considering only the total score, since a very low score in one of its subscales might also be an important factor to increase the risk of PU, even though the total score is not so low.[11]

So, this research aimed to identify the scores of subscales that assess the risk of PU, in the application of Braden Scale, and associate them to the main reasons for hospital admission: comorbidities and demographic characteristics of hospitalized adult patients with total score ≤13.

This research is also justified on the basis that, despite the existence of literature about PU and its factors of risk,[13-14] it is noted the need to deepen knowledge about them. One way to do that is the use of scores analysis produced by the subscales comprising the Braden Scale. Along with

that, it is important to understand better the conditions of patients at risk of PU who are hospitalized at the researched institution.

METHODS

The study followed a cross-sectional design, and it is part of a bigger research project that assessed the risk of PU, its incidence, diagnosis and nursing care.[15] It was developed in 11 inpatient units, five from the medical nursing service and six from the surgical nursing service that care for several surgical and clinical specialties, totaling 347 beds.

In this hospital, which was the area of research, the assessment of PU risk is routinely performed in the patient's admission or within 48 hours after his admission, by applying a sheet containing the Scale of Braden (with its six subscales). The scale reapplication occurs on every week and after each change in the patient´s general state. Patients receiving the score ≤ 13 are classified at risk of PU. This cutting point was based on the study of translation and validation of Braden Scale into Brazilian Portuguese language.[8]

For data collection, all of the evaluation sheets of PU risk with the Scale of Braden containing the score ≤ 13 were selected by the researcher-nurses, in relation to the hospitalized patients between January and June 2008. From them, data were extracted in relation to the scores resulting from the application of Braden scale, and the information of the presence or not of PU, during hospitalization. The sample consisted of 187 sheets; other demographic data, reason for hospitalization and the presence of comorbidities in the patients were collected from their on-line medical records.

Collected data were typed and organized into an Excel for Windows spreadsheet. And, it was analyzed through descriptive statistics, mean calculation, standard deviation, frequency and percentage. In order to compare subscales with variables such as sex, age, hospitalization reason and comorbidity, it was performed the test of Mann-Whitney, and for correlations with these variables, it was applied the test of Spearman. Data were analyzed with the aid of the Statistical Package for the Social Sciences

(SPSS) version 16, and the adopted significance level was 5%.

The research development was approved by the Committee of Ethics and Research on Institution Health under the protocol number 08-319. And, since it is a survey on medical records the researchers signed the Term of Commitment to the use of data.

RESULTS

The research included 187 patients at risk of PU, with total score ≤ 13 in the Scale of Braden. Of these, 121 (64.7%) were women. The mean age was 67 years (± 11.4), which indicates the prevalence of elderly. There was no statistical significance between the higher number of women in comparison to the men (p=0.06), nor in relation to their ages (p=0.80).

In the total score indicated by the Braden scale, 65 (34.8%) patients totaled 13 points, 35 (18.7%) 12 points, and 32 (17.1%) 11 points. Therefore, 132 of them had moderate and high risk of PU.

Some patients showed a total score lower than ten, which indicates high and very high risk of PU. Six of them were patients who were hospitalized with cerebral vascular disease, six with lung disease and one with neoplasia. Ten patients had cerebral vascular comorbidities, eight cardiovascular and eight metabolic ones. The lowest score was seven, which indicates very high risk, and it occurred in the assessment of only three patients (1.6%).

There was no statistically significant difference in comparison with comorbidities or with the reasons for hospitalization.

In the six subscales used to assess the patients´ risk of PU, it was found they were more frequently bedfast and with very limited mobility, in other words, 156 (83.4%) (Chart 1).

Regarding the subscales and variables studied, men showed less moisture than women (p=0.032) and they were also more active than women, in a significant manner (p=0.016). There was a moderate correlation (r=0.33, p=0.001) between age and mobility, but there was no other correlation between subscales with other variables.

Chart 1 - Scores more frequently identified by the subscales related to the Scale of Braden in hospitalized patients at risk of PU (n=187)

Subscale	Score	Number of patients	%
* Activity (bedfast)	1	156	83,4
* Mobility (very limited)	1	156	83,4
* Nutrition (probably inadequate)	2	119	63,6
# Friction and shear (problem)	1	99	52,9
* Sensorial perception (very limited)	2	93	52,9
* Moisture (occasionally moist)	3	83	44,4

* Score varies from 1 to 4, # Score varies from 1 to 3.

The three most common reasons for hospitalization are cerebral vascular diseases, lung cancer and neoplasia, and they included 98 patients (52.4%). The most frequent comorbidities were brain and cardiovascular ones (CVA) with equal frequency (n=72), followed by metabolic (n=47) and psychiatric ones (n=28), as it is shown in chart 2.

Chart 2 - Reasons for patients hospitalization with risk of PU and associated comorbidities (n=187)

Reasons for hospitalization*	Frequency	%	Comorbidities*	Frequency	%
Cerebral vascular	43	23	Cerebral vascular	72	38,5
Pulmonar	30	16	Cardiovascular	72	38,5
Neoplasia	25	13,4	Metabolic	47	25,1
Gastrintestinal/hepatic	21	11,2	Psychytrist	28	15
Cardiovascular	20	10,7	Gastrintestinal	21	11,2
Infective	20	10,7	Rheumatologic	16	8,6
Genitourinary	14	7,5	Infective	14	7,5
Traumatism	14	7,5	Neoplasia	8	4,3

* Reasons for hospitalization and comorbidities are not mutually exclusive.

It was also studied the association between the scores found by subscales of the Braden Scale, and the reasons for patients´ hospitalization. It was verified that 43 patients, which were hospitalized due to cerebral vascular diseases, are in better nutritional status (p=0.006), and also patients with cardiovascular disorders (p=0.022) when compared with patients admitted by other reasons.

The 25 hospitalized patients with neoplasia have lower scores (higher risk) in moisture subscale and higher score (lower risk) in mobility subscale when compared with other groups (p=0.016 and p=0.029, respectively). However, they are in worse nutritional status (p=0.027). There was no other association with the hospitalization reasons.

In the analysis of subscales and comorbidities, it was evidenced that 72 patients with cerebral vascular comorbidities have very limited mobility (p=0.045); very moist (p=0.026), with very limited sensory perception (p=0.012), and nutrition probably inadequate (p=0.034). They present problems in relation to friction and shear (p=0.045), too. It is noteworthy that the patients of this sample were mostly bedfast.

Patients with psychiatric comorbidities are mostly bedfast (p=0.044) when compared to patients with other comorbidities.

DISCUSSION

The findings of this research, which sought to identify risk factors of PU, from the analysis of the subscales scores composing the Braden Scale and associated factors such as age, sex, comorbidities and reasons for hospitalization in patients admitted in medical and surgical units, suggest that the risk of PU is related to age, since the average found was 67 years, similar to other studies conducted in Brazil.[2,9,16-17]

The finding related to the old age is touted as one of the relevant factors in the PU physiopathol-

ogy, especially when combined with other factors such as malnutrition, mobility and humidity.[2,16-17] In the elderly, there is reduction on skin elasticity and cell replacement frequency. Then, the body undergoes changes and comorbidities increase due to fragility. It also occurs reduction of activity and mobility, which increases its propensity for PU development.[13]

In this sample, the largest number of women can be explained, in part, by their bigger presence in comparison with men in most age groups, caused by higher mortality rates experienced by men and greater female longevity.[18] This may be illustrated through biological differences, like the protective factor exerted by the female hormone on cardiocirculatory events and greater exposure of men to external risk factors, like higher consumption of alcoholic beverages, smoking, work, traffic and domestic accidents.[19]

Regarding the risk factors analysis of PU and considering each one of the subscales scores (sensory perception, moisture, activity, mobility, nutrition, friction and shear), it was possible to observe that most patients were bedfast and with very limited physical mobility (83.4%), making them extremely vulnerable to the PU. These data are corroborated in similar studies performed in Brazilian hospitals.[2,6]

Furthermore, it was found inadequate nutrition in more than 60% of the patients, and 50% of them had problems of friction and/or shear, very limited sensory perception and very moist skin. The patients´ sample was homogenous with respect to the risk of PU, since all of them had a total score $\leq$13. It was necessary to perform other associations to understand in greater detail the specificities of this population.

Therefore, by following the subscale line of analysis, their scores were joined to other variables, and it was observed that all men had lower risk in the moisture subscale than women. Possibly, due to their anatomical genitals, which facilitate perineal hygiene in a more effective way and keep their skin in less humid conditions. The literature also suggests that urinary incontinence is a problem that affects the majority of elderly and especially women.[20]

It was also found that men are more active than women, in a significantly way (p=0.016). One possible explanation for that is the fact that women, from their middle age, have higher tendency to overweight in comparison to men and, therefore, they have more difficulties to move alone or they are moved from their beds by others, increasing the risk for developing PU.[21] However, this finding needs to be further studied.

In addition, there was moderate correlation between age and mobility. It is known that the reduction of activity and mobility occurs in most elderly, due to factors related to the body aging, which leads to higher incidence of muscle-skeletal problems and, hence, mobility problems.[22]

Regarding the most frequent reasons for hospitalization, it is possible to mention cerebral vascular, pulmonary and neoplasia diseases, which computed 52% of the sample. Other studies also point out similar data.[6,16,23-24]

Patients who were hospitalized with cerebral vascular diseases showed good scores about nutrition. There are many reasons for this, including the fact that the cerebral vascular event is usually acute, reaching individuals who were previously with good health and nutrition conditions. Other factors to consider are that these patients typically receive assistance at mealtimes during hospitalization; they need a catheter for receiving enteral feeding when they are not able to swallow, which contributes to maintain their good nutritional condition.

Patients with neoplasia presented higher scores in mobility and moisture subscales, possibly, because they did not present limitations preventing them from mobilizing and controlling their physiological eliminations. On the other hand, they showed worse nutrition, which can be explained by showing a catabolic state, anatomical variation of an organ caused by disease (e.g. esophageal cancer, difficulty for swallowing) or by the treatment itself (radiotherapy, chemotherapy), which sometimes impede the adequate nutrition.[25-27]

Referring to comorbidities, that is to say, diseases that overlap and affect the health status and functional capacity of patients, there was higher incidence of cerebral vascular, cardiovascular and metabolic diseases, followed by psychiatric diseases. It is known that the emergence of PU is

multifactorial.[28] However, several studies indicate that patients with cerebral vascular and cardio-vascular comorbidities have a moderate risk score for PU.[17,19,27]

As for psychiatric diseases, it was found in the literature that elderly populations may be more prone to this type of comorbidity.[29] The average age of this sample of patients was 67 years, which could have affected the incidence of comorbidity. The results of this study also found significant association between this comorbidity and the fact that the patient is bedfast, i.e. with low scores in the activity subscale. It is known that the occurrence of psychiatric disorders in patients, who are hospitalized for medical or surgical treatment in general hospitals, is common.[30]

For example, national studies show that depression, regardless the severity, affects from 20 to 33% of patients admitted in wards of surgical and medical clinic.[30-31] Moreover, the impact of depressive symptoms as lack of energy, sadness and negativity are associated with worse outcomes of clinical pathologies, with the increased risk of morbimortality.[32] Still, for the treatment of depression the prescribed medications are antidepressants, which have also been widely used for pain control. But, due to its susceptibility for side effects, including skin changes and complex profile of drug interaction, the use of these medications requires special care in the elderly.[33]

Of course, data analysis and design of this study do not allow causal relations between psychiatric disorders and the use of psychotropic drugs with higher risk of PU. Nevertheless, in cases of elderly patients with this comorbidity, results show it is necessary special attention to prevent this type of injury.

CONCLUSION

It is concluded that the use of isolated total score presented by the Scale of Braden provides an overview of the patient. Yet, scores stratification by subscale might extend and specify this vision in order to better direct the necessary care to prevent PU.

When analyzing the subscales scores, in association with other variables of the study, it was possible to identify which of them contributed more or less to the risk of PU, previously known by the total score ≤ 13, which was submitted by the patients of this sample. Stillness and activity subscales were the most frequently identified with low scores, which reinforces the need for paying attention to the proper positioning and mobilization of patients in order to avoid PU.

In the association between subscales and reasons for hospitalization and comorbidities, it was noted that patients with cerebral vascular diseases had lower scores with greater frequency in activity, mobility and moisture, which denotes their difficulties to mobilize, sphincters control, increasing moisture and consequently the risk of PU. In the nutrition subscale, the lowest scores were among patients with neoplasia, either by the disease progression and/or its treatment, which interferes in their nutrition and makes them susceptible to PU.

It is confirmed that the subscales scores analysis of the Braden Scale allowed stratifying the risk of PU, correlating it with other variables in this study and, thus, getting subsidies for the implementation of preventive care targeted to the identified specificities.

ACKNOWLEDGEMENTS

REFERENCES

1. National pressure ulcer advisory panel [internet]. Washington (EU). [acesso 22 abr 2011] Disponível em: http://www.npuap.org

2. Blanes L, Duarte IS, Calil JA, Ferreira LM. Avaliação clínica e epidemiológica das úlceras por pressão em pacientes internados no Hospital São Camilo. Rev Assoc Med Bras 2004 Abr-Jan; 50(2):182-7.

3. Scola ML, Menegon DB, Bercini RR. Cuidado de enfermagem na prevenção e no tratamento de úlcera de pressão. In: Leite MMJ, coordenador. Programa de atualização para técnicos em enfermagem Porto Alegre (RS): Artmed; 2008.

4. Cortés LL. The prevention and treatment of pressure ulcers in adults. Disease Prev News. 1998 May; 58(10):1-7.

5. Grey JE, Harding KG, Enoch S. Pressure ulcers. British Med Journ 2006 Feb; 332: 472-75.

6. Anselmi ML, Peduzzi M, Junior IF. Incidência de úlcera por pressão e ações de enfermagem. Acta Paul Enferm 2009 Mai-Jun; 22(3):257-64.

7. Dealey C. Cuidando de feridas: um guia para enfermeiras. 2th ed. São Paulo (SP): Atheneu; 2001. 248 p.

8. Paranhos WY, Santos VLCG. Avaliação de risco para úlceras de pressão por meio da escala de Braden, na língua portuguesa. Rev Esc Enferm USP. 1999; 33(Esp):191-206.

9. Cremasco MF, Wenzel F, Sardinha FM, Zanei SSV, Whitaker IY. Úlcera por pressão: risco e gravidade do paciente e carga de trabalho de enfermagem. Acta Paul Enferm 2009; 22(Esp):897-902.

10. Serpa LF, Santos VLCG, Campanili TCGF, Queiroz M. Validade preditiva da Escala de Braden para o risco de desenvolvimento de úlcera por pressão em pacientes críticos. Rev Latino-Am Enferm 2011 Jan-Fev; 19(1):50-7.

11. Menegon DB, Bercini RR, Brambila MI, Scola ML, Jansen MM, Tanaka RY. Implantação do protocolo assistencial de prevenção e tratamento de úlceras de pressão do Hospital de Clínicas de Porto Alegre. Rev HCPA. 2007; 27(2):61-4.

12. Magnan MA, Maklebust J. The nursing process and pressure ulcer prevention: making the connction. Adv Skin Wound Care 2009 Feb; 22(2):83-92.

13. Souza DMST; Santos VLCG. Fatores de risco para o desenvolvimento de úlceras por pressão em idosos institucionalizados. Rev Latino-am Enferm 2007 Set-Out; 15(5):958-64.

14. Lyder C. Pressure ulcer prevention and management: what are known risk factors for pressure ulcers. Annu Rev Nurs Res. 2002; 20(2):35-62.

15. Lucena AF, Santos CT, Pereira AGS, Almeida MA, Dias VLM, Friedrich MA. Clinical profile and nursing diagnosis of patients at risk of pressure ulcers. Rev Latino-sm Enferm 2011 May-Jun; 19(3):523-530.

16. Rogenski NMB, Santos VLCG. Estudo sobre a incidência de úlceras por pressão em um hospital universitário. Rev Latino-Am Enferm 2005 Jul-Ago; 13(4):474-80.

17. Medeiros ABF, Lopes CHAF, Jorge MSB. Análise da prevenção e tratamento das úlceras por pressão propostos por enfermeiros. Rev Esc Enferm USP 2009 Mar; 43(1):223-8.

18. Lima e Silva EWN, Araújo RA, Oliveira EC, Falcão VTF. Aplicabilidade do protocolo de prevenção de úlcera por pressão em unidade de terapia intensiva. Rev Bras Ter Intensiva 2010 Abr-Jun; 22(2): 175-185.

19. Lisboa CR. Risco para UP em idosos Institucionalizados [tese]. Belo Horizonte (MG): Universidade Federal de Minas Gerais. Programa de Pós-Graduação em Enfermagem; 2010.

20. Caldas CP, Conceição IRS, José RMC, Silva BMC. Terapia comportamental para incontinência urinária à mulher idosa: uma ação do enfermeiro. Texto Contexto Enferm 2010 Out-Dez; 19(4):783-8.

21. Fife C, Otto G, Capsuto EG, Brandt K, Lyssy K, Murphy K, Short C. Incidence of pressure ulcers in a neurologic intensive care unit. Crit Care Med 2001 Feb; 29(2):283-90.

22. Geraldina CI. Incidência de úlcera de pressão e fatores de risco relacionados à paciente de um centro de terapia intensiva [tese]. Ribeirão Preto (SP): Universidade de São Paulo (USP); 2003.

23. Freitas CN. Internações hospitalares pelo SUS em Porto Alegre. [dissertação]. Porto Alegre (RS): Universidade Federal do Rio Grande do Sul, Departamento de medicina social; 2008

24. Filho AIL, Matos DL, Giatti L, Afradique ME, Peixoto SV, Costa MFL. Causas de internações hospitalares entre idosos brasileiros no âmbito do Sistema Único de Saúde. Epidem Serv de Saúde 2004 Dez; 13(4):229-38.

25. Santos AFL, Ramos AM. Nutrição e câncer. Prat Hosp 2007 Mar-Abr; 50:37-8.

26. Silva MPN. Síndrome da anorexia-caquexia em portadores de câncer. Rev Bras de Cancerol 2006 Jan-Mar; 52(1):59-77.

27. Serpa LF, Santos VLCG. Desnutrição como fator de risco para o desenvolvimento de úlceras por pressão. Acta Paul Enferm 2008; 21(2):367-9.

28. Gomes FSL, Bastos MAR, Matozinhos FP, Temponi HR, Meléndez GV. Fatores associados à ulcera de pressão em pacientes internados nos centros de terapia intensiva de adultos. Rev Esc Enferm USP 2009 Dez; 44(4):1070-6.

29. Aires M, Paz AA, Perosa CT. Situação de saúde e grau de dependência de pessoas idosas institucionalizadas. Rev Gaúcha Enferm 2009 Set; 30(3):492-9.

30. Botega NJ. Psiquiatria no hospital geral: morbidade psiquiátrica no hospital geral. In: Prática psiquiátrica no hospital geral: interconsulta e emergência. Porto Alegre (RS): Artmed. 2006.

31. Furlanetto LM, Brasil MA. Diagnosticando e tratando depressão no paciente com doença clínica. J Bras de Psiq 2006; 55(1):8-12.

32. Lima M, Colognesi L, Domingos NAM, Miyazaki MCOS, Valério NI. Depressão em pacientes clínicos e cirúrgicos internados em hospital geral. Arq de Ci & Saúde 2005 Abr-Jun; 12(2):63-6.

33. Camozzato A, Filippon, APM, Kruter BC. Psicofármacos em idosos. In: Cordioli AV. Psicofármacos: consulta rápida. 4th ed. Porto Alegre (RS): Artmed. 2011, p. 525-39.

Correspondence: Dóris Baratz Menegon
Hospital de Clínicas de Porto Alegre – Grupo de enfermagem
Rua Ramiro Barcelos, 2350, 5º andar
90035-903 – Porto Alegre, RS, Brasil
E-mail: dmenegon@hcpa.ufrgs.br