



CLÍNICA

Chronic wounds treated in an emergency service of primary health care

Heridas crónicas atendidas en un servicio de urgencias

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ABSTRACT

A chronic wound is defined as a loss of continuity of the epithelial surface with a loss of substance with little or no tendency to spontaneous healing and that requires very long periods for healing by secondary intention. It is an important health care problem affecting the health system because of the decreasing quality of life, their high cost and long-time dedication of professional nurses.

The aim of this study is to describe the prevalence and the type of injuries suffered by patients treated in the Emergency Service, scheduled for weekends by his/her nurse at the out-patients clinic.

The results obtained show that almost a half of the patients attended the clinic for chronic wounds and the 30% of them did not bring their nurse indications concerning the realization of the cure.

RESUMEN

Una herida crónica se define como una pérdida de continuidad de la superficie epitelial con pérdida de sustancia con escasa o nula tendencia a la curación espontánea y que requiere periodos muy prolongados para su cicatrización por segunda intención. Constituye un importante problema asistencial que afecta al sistema de salud por la disminución de la calidad de vida, su elevado coste económico y por la dedicación de mucho tiempo de los profesionales de Enfermería.

El **objetivo** de este estudio consiste en describir la prevalencia y tipo de heridas que padecen los pacientes atendidos en el Servicio de Urgencias, programados para fines de semana por su enfermero del centro de salud.

Los **resultados** obtenidos evidencian que casi la mitad de los pacientes acudían por presentar heridas crónicas, y que el 30% no traían indicaciones de su enfermero referente de la realización de la cura.

INTRODUCTION

Patients having Chronic Wounds (HC) come almost daily to their health center in order to heal their wounds or in the case of suffering an impaired mobility or immobilization, is the nurse who travels to the patient's house. Being of great importance the work of the emergency services that attends these patients during weekends and holidays, following the continuity on the care rendered.

The HC are one of the most important health problems affecting the health system due to the diminution in the quality of life of the patients and their carers. Its high cost and long time taken to them by nurses. In Spain the annual cost of treatment is estimated at over 435 million Euros, belonging 18.9% to primary care, 28% to Hospital Care and 53.1% to public health and medical care services ⁽¹⁾. In the case of ulcers in the lower extremity, according to the research conducted in Spain, the total cost of a visit, its equipment, nursing and medical care is added up to 150 Euros ⁽²⁾; to which it has to be added the cost of the unemployment compensation and the time spent by families.

A Chronic Wound is the one that requires healing for a very long period of time, 6 weeks are not enough to complete its closing process, and heals by secondary intention, in a complex process that removes and replaces damaged tissue ⁽³⁾. There is no a clear consensus in the reviewed bibliography regarding to the classification of HC as Patricio Andrades y cols ⁽⁴⁾ mentions. He states that there are many wound classifications. In general, they depend on the creator's desire and considering of great importance to determine whether the wound is sharp or chronic and based also on the concepts of order and temporality. In this way he considers as a HC not only a wound that does not follow an organized repairing process, but also a wound following a repair process that does not restore the anatomical and functional integrity. It is established a 30 days period to differentiate acute from chronic wounds. Within the Handbook about prevention and care of local chronic wounds ⁽³⁾ developed by Cacedo Gonzalez y cols, and recognized as of professional interest by GNEAUPP, chronic wounds can be distinguished into Pressure Ulcers, Ulcers Lower Extremity (arterial, venous and injuries resulting from the diabetic foot), and Neoplastic Ulcers. Besides, some acute injuries can become chronic complications such as suture dehiscence, wounds that become fistulas or wounds with a wrong evolution due to its own infection. We have to differentiate chronic wounds from acute, surgical or traumatic wounds, because the three latter heals by first intention within 7 and 14 days. Other authors include into chronic wounds the open abdomen ⁽⁵⁾ among others.

The wound healing can be defined as a process that promotes the tissue healing whose cure or remission is the goal to complete the closure of the same ⁽⁶⁾. Within the normal healing process or healing by first intention it can be differentiated the phases of inflammation, proliferation and remodeling. However, in normal healing process in HC is performed by second intention, extending the inflammatory phase; in which deeper wounds, the ones with a higher loss of tissue or the ones considered as potentially infected and are not sutured, allowing the healing process to develop into its corresponding phases, lasting the process itself from weeks to months and even years until its spontaneous closure.

Concept and Types of Chronic Wounds

- **Pressure ulcers.** Ischemic injury that is located on the skin and the surrounding tissues. It is caused by the combination of extrinsic factors as pressure forces, shear and friction, being decisive the pressure / time ⁽³⁾ relationship. Here can be included iatrogenic ulcers. They are secondary to the treatment of a primary disorder and they are caused by friction and pressure mechanisms, as it happens on the nose by an extended exposure to the oxygen mask or the nasogastric tube, and also on the urinary meatus as a consequence from a prolonged bladder drilling, etc.
- **Lower extremity ulcers.** They are characterized by a loss of the skin integrity in the anatomical region located between leg and foot ⁽³⁾; they are produced by an alteration on the venous and arterial blood stream in the lower extremities. These ulcers generate a high demand for health's care at all levels, becoming essential a multidisciplinary treatment. We can differentiate venous, arterial and diabetic foot ulcers.
- **Venous ulcers.** They are produced by a functional or anatomic incompetence on the valve producing a blood reflux that produces venous hypertension and an insufficient blood supply to the tissues. This causes the appearance of necrosis and skin ulcers. They are the most frequent, about 80-90 % is of this etiology, and they most frequently affect women aged between 40 and 50 years ⁽³⁾.
- **Arterial Ulcers.** They occur at a frequency of 5% within the lower extremity ulcers. Their appearance is commonly in males over 60 years. They are the result of a severe ischemia extended on time ⁽³⁾. They have a poor prognosis, because until blood stream is not restored, the cure cannot be reached.
- **Diabetic foot.** The Spanish Society of Angiology and Vascular Surgery ⁽⁷⁾ defines the Diabetic Foot as a clinical disorder with a etiopathogenic and neuropathic basis, and induced by the kept hyperglycemia, in which with or without ischemia coexistence, and previous to traumatic trigger, produces injury and / or ulceration of the foot. The ulcer on the diabetic foot is not a chronic wound by definition, but a wound that becomes chronic over time. It can be either by a delayed diagnosis or an inadequate treatment of the same. Therefore, we find a lesion whose healing process is altered.
- **Neoplastic ulcers.** They are skin lesions progressively enlarging their size, resulting in a non-healing open ulcer and destroying the surrounding tissue ⁽³⁾. Some authors report that these ulcers may appear over 10% of patients with metastases in the terminal phase of their illness ⁽⁸⁾. They generate a large impact on both the patient and caregivers due to the implications involved in the disease and so on the nursing staff taking care of the patient due to the features of the injury such as pain, bleeding and odor. We can distinguish the neoplastic ulcers caused by the tumor itself, and secondary to metastasis or related to complications during the therapeutic process such as chemotherapy by the cytostatic extravasation and radiotherapy.

Associated risk factors

Age, medications consumed by the patient, smoking, malnutrition, obesity, a sedentary lifestyle, the social and family situation, associated diseases or inadequate management of wounds are factors that will adversely affect the wound healing. As associated risk factors may be mentioned, among others, diabetes and other kidney,

liver or lung diseases, cancer, an insufficient supply of oxygen to the tissues, a weakened immune system or the presence of an infected wound or presence of a foreign body.

Approach to Chronic Wounds

For a proper health approach to chronic wound and the improvement of their healing, on an initial assessment it must be evaluated and recorded the age of the injury, its location, the current state, its dimensions, tunneling, the state of the surrounding skin, the amount and type of exudate, signs of infection, presence of pain, smell... After the assessment, you have to plan the kind of cure to carry out indicating the type of debridement performed, local cares and the frequency of cures. Of the utmost importance, as is the assessment, the planning of the treatment and the proper treatment is the record of treatment that is being done by the nursing staff. It is on this way how the continuity of patient care can be ensured if the patient is treated by several nurses in the area. Moreover, this guarantees non interferences on the wound healing, because in many cases, each nurse uses different treatments to initiate, interfering on the healing process.

Health workers generally pay more attention to get the complete healing of the wound, without considering the pain caused by the same and diminishing the quality of life of these patients. Therefore, it is important to carry out a total assessment and not to focus only on the wound, but also on the impact it has on patients and their quality of life.

OBJECTIVES

The aim of this study was to evaluate the presence of chronic wounds in patients attended in the Emergency Service of Primary Care in Águilas-Murcia. All these patients were scheduled for weekends and holidays by the nurse of reference in their health center.

METHODOLOGY

- **Type of study:** Observational descriptive study, cross-sectional during the months of April, May and June of 2012 (a Sunday per month coinciding with one of the authors making their work in that day). It is realized a descriptive analysis using frequencies and percentages. The statistical analysis was performed through the Microsoft Excel® 2003 software.
- **Study of population.** Non-probability sampling, obtaining 40 patients previously assisted in the Emergency Department for Nursing Scheduled for cures and for Scheduled Nursing at Home.
- **Methodology.** Data were collected through a hetero-administrative questionnaire (questionnaire 1), to patients attending to the Emergency Department and the ones scheduled to go to their houses. All of them are done by the same evaluator avoiding the duplicity of patients.
- **Variables studied.** The chosen variables are age, sex, type of injury, indications by primary care nurses about the healing process, duration (to exclude or include patients in the study) and the reason that caused the cure.

- **Scope of the study.** The study took place in the Emergency Service (SUE) of Águilas, which belongs to the Emergency Management 061 in Murcia.

- **Including criteria.** We have collected data from patients with chronic wounds with an evolution of more than 4 weeks.

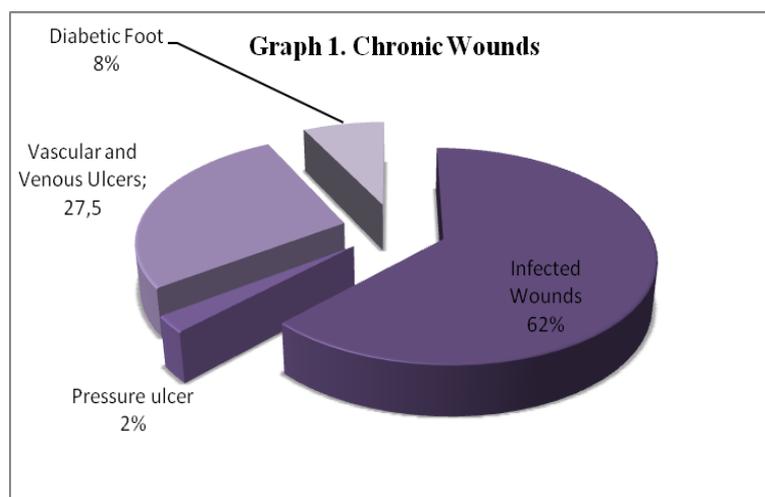
- **Ethical aspects.** The participation has taken place after the patients were previously informed about the objectives of the study. They gave their consent for inclusion, and we ensure them their anonymity.

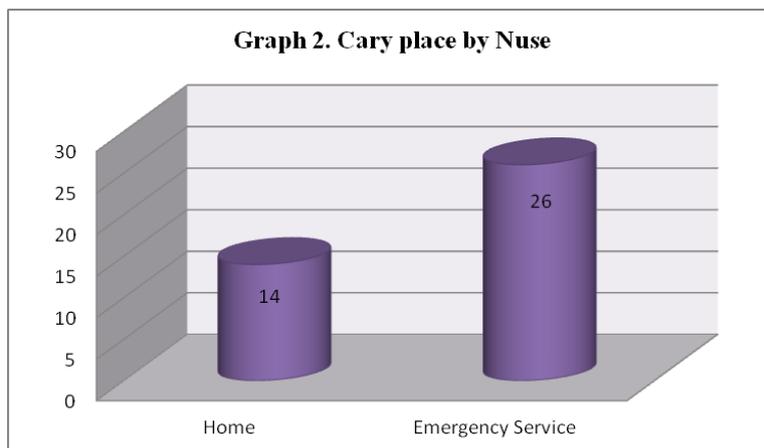
RESULTS

We looked after 94 patients needing wound cures. They were derived by their reference nurse during the studied days. 54 patients went to the Emergency Service to get their scheduled. As a result, they were excluded from the study because their wounds followed the normal healing process. Their cures were related to burns and stitches after surgery or accidental incisions. So, we select a study sample (n) of 40 patients with chronic wounds, of which, 95% (38) of the patients seen are women and 5% men (2 patients), with an average age of 55.9 years old, standard deviation of 6.52 years, where the youngest is 42 years and the oldest one 74 years.

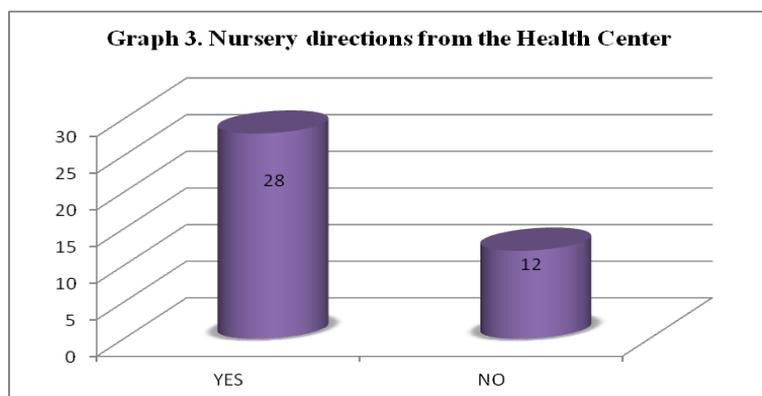
Among the patients treated for chronic wounds nursing (Graph 1), in 25 cases (62.5%) they showed or infected wounds or wrong evolution, 2.5% (1 case) for pressure ulcers. 14 patients (35%) came for cures related to lower extremity ulcers, 11 cases (27.5%) for vascular and venous ulcers (not differentiated between them by the absence of medical diagnosis or confirmation) and 3 cases (7.5%) corresponded to wounds in diabetic foot.

With respect to the care place by nurses (Graph 2) 14 patients (35%) are attended at home and 26 patients (65%) are treated in the Emergency Service after going there by their own means.





Only 70%, 28 of the patients brought nursery directions from the Health Center explaining the monitoring guideline of the cure. The remaining 12 patients (30%) did not bring it. So, the cure was performed under the nurse judgment or according to the patient's indication.



DISCUSSION

In our study, the average age of the attended patients ranges over 56 years , unlike the prevalence study about pressure ulcers conducted in Spain in 2005, which reports that 84.7% of patients treated for pressure ulcers belong to the age of 65 ⁽⁹⁾; as it happens in the study conducted at the General Hospital of Lanzarote. In it appeared a higher percentage of UPP in people over 60 years ⁽¹⁰⁾ with a female predominance of 62.4%. According to the prevalence study conducted in Spain by the National Group for the Study and Consulting in UPP (GNEAUPP) in 2006, it is known that women are the mainly affected section ⁽¹¹⁾, as it also occurs in our study corresponding to 95% of the patients seen. In the third national study realizes in 2009 by GNEAUPP this UPP prevalence decreased to 80.7% ⁽¹²⁾.

In the prevalence study conducted in a region of the province of Barcelona, it is reported that the average age was 77.5 years and 67.9% were women ⁽¹³⁾, not coinciding with our results in terms of the average age of the treated patients .

The most prevalent chronic wounds in the Emergency Service of Águilas are the ones infected or with a poor outcome, followed by lower extremity ulcers that comprise

vascular ulcers, venous ulcers and diabetic foot ulcers. Unlike the study in Barcelona, regarding etiology, in our centre the most affected are the wounds with a poor outcome or the infected ones, followed by ulcers of the lower extremity - vascular and venous-(27.5%) compared to 40, 6% referred in this study. Likewise, in our environment, pressure ulcers, at the time of the study, had a low prevalence, compared with studies like the one in Barcelona which ranges to 38.2% ⁽¹²⁾.

CONCLUSIONS

Through this study we have tried to know the situation about the prevalence of chronic wounds in our workplace. They are derived to get continuity of cares by nurses in primary care and data on this theme were unknown. The prevalence of chronic wounds found in our research varies in relation to the published studies. This can be due to its performance on centers with different characteristics, not being published any studies on Emergency Services in Primary Care. Considering the obtained figures, we do not allow a comparison with those obtained in other studies. Likewise, the provision of health care resources in each center or region is different, every injury is treated differently, what is most, in an Emergency Service there is not the same material available than in a Health Center. So, cures are sometimes performed with a different methodology and material.

At present, many patients are referred from primary care on Sundays and holidays for scheduled cures. We have to highlight the difficulty for the continuity of care as not all patients bring indications from their family nurse to perform the cure. There is, therefore, a barrier on the continuity of cares that can worsen the course of the wound. To optimize the financial resources and the time devoted by the nursing staff, there should be used Clinical Practice Guidelines between health centers and the primary care services that perform emergency care during weekends and holidays. These guidelines would unify criteria and achieve a continuum of care; they would reduce the incidence and prevalence, considered as important indicators of quality of the nursing care. Moreover, they would facilitate the therapeutic indication in the care of the cure, remaining essential the fact that the patient's nurse will provide a referral note indicating the treatment performed to be shown in the centers without computer access to the digital health records.

To decrease the incidence of Chronic Wounds is worthy to act from the prevention at all levels of care, being the most efficient method to deal with the problem.

REFERENCES

- (1) Posmett J, Soldevilla JJ, Torra JE. Epidemiología y Coste de las UPP en España. Estudio GNEAUPP 2005. Libro de Abstracts del VI Simposio Nacional de UPP. GNEAUPP. Zaragoza 2006.
- (2) Marín Paredero V. Costes sociales y económicos de las úlceras de la extremidad inferior. La opinión de los expertos. Actualidad y controversia en la curación de heridas. Glosa, S.L., 2002.
- (3) Cacicedo González R, Castañeda Robles C, Cossío Gómez F, Delgado Uría A, Fernández Saíz B, Gómez España MV, Gómez Fernández A. Manual de Prevención y Cuidados Locales de Heridas Crónicas. Servicio Cántabro de Salud, 1º edición, 2011 [acceso 12 Mayo 2013]. Disponible en: http://www.gneaupp.es/app/adm/documentos-guias/archivos/40_pdf.pdf

- (4) Andrades P, Sepúlveda S, González J. Curación avanzada de heridas. Rev Chilena de Cirugía, 2004. [acceso 12 Mayo 2013]; 56 (4): 396-403. [acceso 12 Mayo 2013]. Disponible en: [http://www.revistacirugia.cl/PDF%20Cirujanos%202004.../Rev.Cir.4.04.\(18\).AV.pdf](http://www.revistacirugia.cl/PDF%20Cirujanos%202004.../Rev.Cir.4.04.(18).AV.pdf)
- (5) Jiménez Jiménez CE. Terapia de presión negativa: una nueva modalidad terapéutica en el manejo de heridas complejas, experiencia clínica con 87 casos y revisión de la literatura. Rev colomb. Cir., 2007 [acceso 12 Mayo 2013]; 22(4): 229-224. Disponible en: http://www.scielo.org.co/scielo.php?pid=S2011-75822007000400004&script=sci_arttext&lng=es
- (6) Consenso sobre cicatrización de heridas crónicas. Sociedad Argentina de Dermatología, 2008 [acceso 12 Mayo 2013]. Disponible en: http://www.sad.org.ar/file_download/18/cicatrizacion.pdf
- (7) Rueda J, Aragón FJ, Giralt E, Capillas R, Gago M, García F. Pie diabético. En: Soldevilla JJ, Torra JE (eds). Atención Integral de las Heridas Crónicas, 1ª Ed. Madrid: SPA 2004; 331-358.
- (8) Soldevilla J. J.Cuidados de las heridas neoplásicas y manejo del linfedema. En: Astudillo W. et al. Cuidados Paliativos en Enfermería. San Sebastián-España 2003. Sociedad Vasca Cuidados Paliativos 107-121.
- (9) Soldevilla Agreda, J.; Torra i Bou, J.-E.; Verdú Soriano, J.; Martínez Cuervo, F.; López Casanova, P.; Rueda López, J.; Mayán Santos, J.M.: 2º Estudio Nacional de Prevalencia de Úlceras por Presión en España, 2005. Epidemiología y Variables definitorias de las lesiones y pacientes.
- (10) Hernández Martínez FJ, Jiménez Díaz JF, Rodríguez de la Vera BC, Navarro García E, Navarro García R. Cuidado de Heridas (Interdepartamental). Rev Canarias Médica y Quirúrgica, 2011, [acceso 10 Mayo 2013]; 50-59. Disponible en: www.acceda.ulpg.es/bitstream/10553/5755/1/0514198_00024_0007.pdf
- (11) Torra JE, Soldevilla J *et al.* Primer Estudio Nacional de Úlceras de pierna en España. Estudio GNEAUPPUIFC-Smith&Nephew 2002-2003. Epidemiología de las úlceras venosas, arteriales, mixtas y de pie diabético. Gerokomos 2004; 15 (4): 230-47.
- (12) Soldevilla Agreda JJ, Torra i Bou JE, Verdú Soriano J, López Casanova P. 3.er Estudio Nacional de Prevalencia de Úlceras por Presión en España, 2009: Epidemiología y variables definitorias de las lesiones y pacientes. Gerokomos, 2011 [16 marzo 2013]; 22(2): 77-90. Disponible en: http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1134-928X2011000200005&lng=es. <http://dx.doi.org/10.4321/S1134-928X2011000200005>
- (13) Ferrer Solá, M; Chirveches Pérez, E; Molist Señé, G; Molas Puigvil, M; Besolí Codina, A; Jaumira Areñas, E; y cols. Prevalencia de las heridas crónicas en una comarca de la provincia de Barcelona. Enferm Clin., 2009; [acceso 20 Marzo 2013]; 19:4-10. Disponible en: <http://www.elsevier.es/es/revistas/enfermeria-clinica-35/prevalencia-heridas-cronicas-una-comarca-provincia-barcelona-13133272-originales-2009>

ATTACHMENT

Questionnaire 1

QUESTIONNAIRE ABOUT ATTENDED WOUNDS BY THE NURSING STAFF IN THE EMERGENCY SERVICE

The aim of this questionnaire is to conduct a study to determine the prevalence of chronic wounds attended by the nursing staff in the Emergency Service of Primary Care of Águilas (Murcia), looked after during Sundays and holidays. The patient's anonymity is guaranteed, giving consent for the study.

DATE _____

NAME AND SURNAME (initials only) _____

AGE _____ SEX _____

EVOLUTION TIME OF THE INJURY _____

TYPE OF INJURY _____

DIAGNOSED BY GENERAL PRACTITIONER YES () NO ()

BRING INSTRUCTIONS FROM HIS PRIMARY NURSE. YES () NO ()

TREATED IN: EMERGENCY

WOUND LOCATION



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