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ORIGINAL

Symphonological Theory and Nursing Process: Successful case for chronic wound closure

Teoría sinfonológica y proceso de enfermería: Caso exitoso para el cierre de heridas crónicas

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ABSTRACT

Introduction: chronic ulcers pose a challenge for both dermatological therapy and the nursing discipline. It is imperative to know the effectiveness of new care strategies for its management. The use of the nursing process is of great importance to achieve an adequate identification and intervention of care needs for patients with this condition.
Objective: this case presents evidence on the successful management of chronic wounds through a comprehensive, local and systemic wound management protocol.
Method: the evolution of three patients with chronic wounds and their evolution until complete closure are shown making use of biosymphonological theory and Nursing process
Results: the intervened patient showed a total closure of the wound in a period not exceeding 8 weeks without presenting adverse reactions or events and showing complete adherence to the protocol.
Conclusions: the efficacy of a chronic wound management protocol is shown, evidenced in its regeneration and complete closure. It is necessary to continue with the application of this type of strategy to a larger number of patients in order to spread its use.

Keywords: Wounds and Injuries; Wound Closure Techniques; Nursing Process; Patient Care Management.

RESUMEN

Introducción: las úlceras crónicas suponen un reto tanto para la terapia dermatológica como para la disciplina de enfermería. Es imperativo conocer la eficacia de nuevas estrategias de cuidado para su manejo. La utilización del proceso enfermero es de gran importancia para lograr una adecuada identificación e intervención de necesidades de cuidado para pacientes con esta condición
Objetivo: este caso presenta evidencia sobre el manejo exitoso de heridas crónicas a través de un protocolo de manejo de heridas integral, local y sistémico.
Método: se muestra la evolución de tres pacientes con heridas crónicas y su evolución hasta un cierre completo haciendo uso de la teoría biosinfonológica y el proceso de enfermería.
Resultados: el paciente intervenido mostró un cierre total de la herida en un periodo no superior a 8 semanas sin presentar reacciones o eventos adversos y mostrando una adherencia completa al protocolo.
Conclusiones: se muestra la eficacia de un protocolo de manejo de las heridas crónicas evidenciado en suregeneración y cierre completo. Es necesario continuar con la aplicación de este tipo de estrategias a un número mayor de paciente para poder difundir su uso.

Palabras clave: Heridas y Lesiones; Técnicas de Cierre de Heridas; Manejo de Atención al Paciente; Proceso de Enfermería.

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INTRODUCTION

Wound care has been reported as a basic nursing care since Florence Nightingale promoted the development of wound care as an essential part of caring for the wounded in war. Traditionally, there have been two types of wound dressings: traditional dressings, which use low-tech dressings (gauze), and advanced dressings, which use dressings with active substances that interact with the microenvironment of the wound, such as hydrocolloids, alginates, or collagen, among others. In Colombia, as in many Latin American countries, resources for the care and treatment of these patients are limited, with traditional wound care being performed in most health institutions, with known ineffective results.

It is well known that nurses retain autonomy in managing patients with chronic wounds, as described in studies that highlight this value as a prerequisite for the full use of technologies, which facilitate achieving even greater autonomy. In this sense, nursing professionals can and should be at the forefront of new technologies that can be used within the framework of our discipline. This is how recent experiences have been described with some strategies, such as ozone therapy and extracellular matrices (ECM), in people with this condition, among others. However, these new strategies cannot be an isolated process, so nursing support with the organization of an individualized care plan and the application of their knowledge is necessary to provide comprehensive care.

The objective of this article is to present evidence on the successful management of chronic wounds through a comprehensive, local, and systemic wound management protocol that includes the application of symphonological theory, the nursing process, and an extracellular matrix for patients at a first-level care hospital in the municipality of Girón, Colombia.

Type of study: Case description of a patient who attended the wound clinic of a first-level care hospital during the period between October and November 2019.

METHOD

The assessment of individuals was carried out using the NANDA domains, where the alteration of domain 11, safety and security, class 2, physical safety, was identified as a priority, highlighting the following relevant aspects: 47-year-old man, low socioeconomic status, BMI: 30,2, grade I obesity, moderate risk in medical management with a 3-year-old venous ulcer located on the posterior lower third of the left lower limb, with a wound diameter of 4,8 cm and a width of 2,7 cm, irregular morphology, excavated edges, perilesional skin with whitish maceration, bed with naturalized fibrin biofilm with moderate serous exudate and watery consistency. He had previously been treated with various protocols and technologies without improvement. Nursing diagnosis 00046 is prioritized according to NANDA: Impaired skin integrity related to impaired circulation.

Through the symphonic bioethical theory of Gladys Husted and James Husted, which is based on the concept of human rights, considering it as an essential agreement for the prevention of aggression between rational beings, an agreement that, in turn, is the foundation of any form of human interaction. Considering this, the patient and the healthcare professional can and must agree to act with the patient's goals in mind, relying on autonomy, freedom, objectivity, the intention to do good and avoid harm, self-assertiveness, and fidelity.[1,2] About this theory, he defined a protocol that was established with the patient, considering their context, environment, and rights. One of these was informed consent and the agreement to comply with the protocol, which consisted of the care they should receive at home and their acceptance and compliance with regular hospital appointments. To achieve this, the patient's primary motivations for continuing with their care were identified, while education was provided, allowing space for discussion of questions and concerns. This made it possible to set a joint goal: complete wound closure.

Once these agreements were in place, the NOC (Nursing Outcomes Classification) outcome label 1103: Wound healing by secondary intention was established as the goal. This was developed based on individualizing activities suggested in the NIC (Nursing Intervention Classification) 3660: Wound care. Activities included describing the characteristics of the wound, cleaning with antibacterial soap, and washing with saline solution, which constituted the disinfection phase. Within the specific administration of the wound, the Regenesis matrix was applied. A suitable dressing was also maintained throughout the intervention period, depending on the location of the wound, and a thorough inspection was carried out each time the dressing was changed. Changes were observed by measuring the wound in centimeters and keeping a photographic record for each day the protocol was applied.[3]

The initial disinfection and debridement phase was carried out over a week, which showed an improvement in the characteristics of the wound, such as exudate, perilesional skin, and a reduction in diameter. The protocol was then applied for 7 weeks.

RESULTS

Within eight weeks, complete closure of the wound was observed, which was assessed with the outcome label "wound closure by secondary intention" using the following indicators: serous secretion and reduction in wound size, applying a Likert scale ranging from extensive to none. These data are shown in the Table and Figure 1. In addition, each intervention had to be accompanied by a focused assessment to identify potential new care needs, as well as education related to the application of the protocol and the commitments that the patient had to fulfill to achieve the expected results.

Table 1. Weekly monitoring of NOC indicators in the patient

NOC Indicator	Conditions during the disinfection and/or debridement phase	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Decrease in wound size	Wide in cm	4,8	4,6	4,3	3,7	3,5	2,3	0,6	0,3
	Width in cm	2,7	2,4	2	1,9	1,2	0,6	0,5	0,2
Serous secretion	Serous—Watery Consistency	Moderate	Moderate	Moderate	Moderate	Moderate	Little	Little	Absent

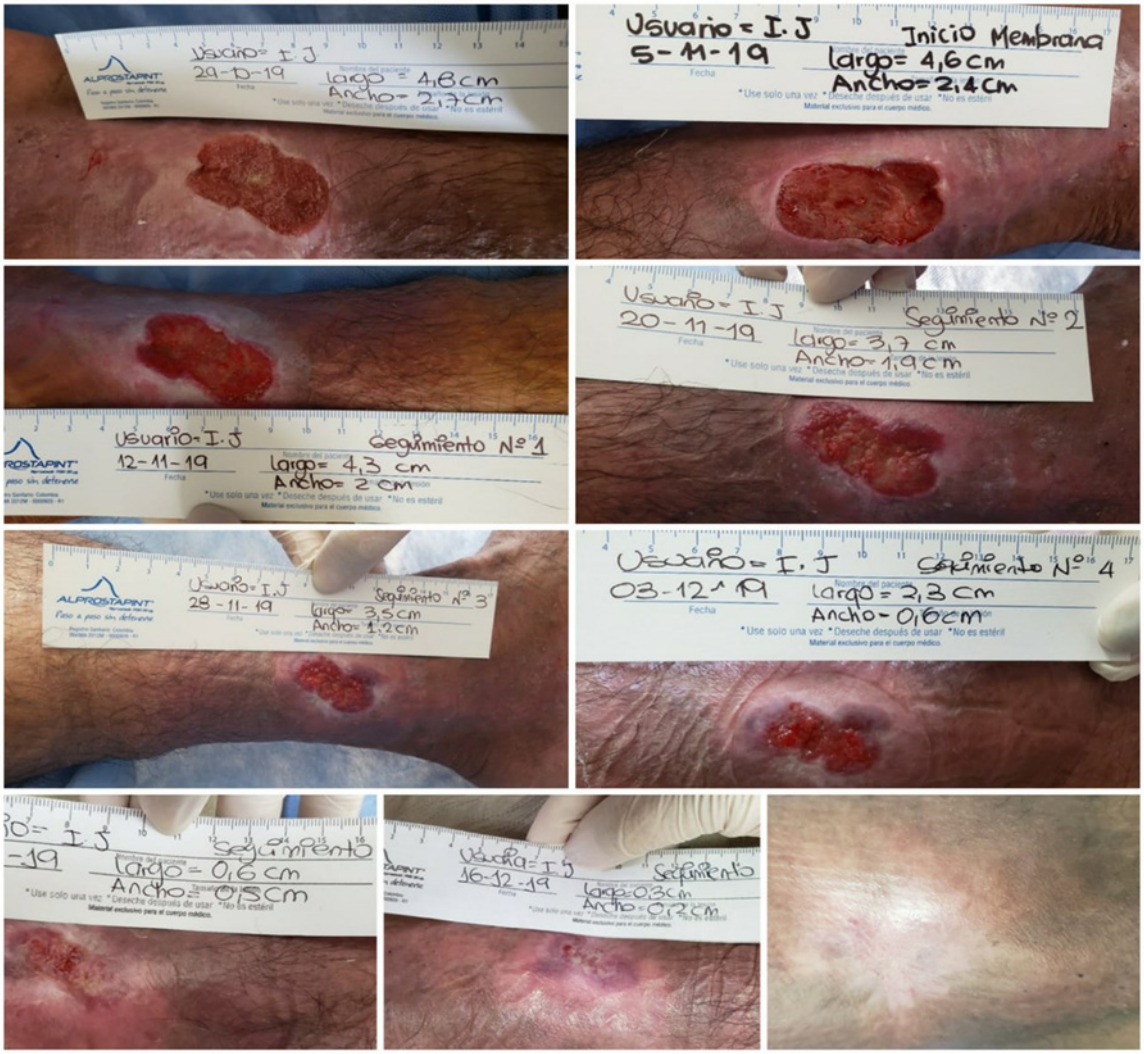

Figure 1. Weekly evolution of the wound. The reduction and complete closure of the wound can be observed

DISCUSSION

Wounds treated with the new healing protocol, which integrated nursing theory and processes with innovative care using the Regenesis® extracellular matrix, achieved complete wound closure quickly compared to conventional treatment. These results demonstrate the effectiveness of this protocol in the management of chronic wounds in patients whose medical history and socioeconomic conditions generally limit their recovery, causing them to remain in this condition for years, which is exacerbated by restricted access to healthcare services, either due to geographical location or limited financial resources. It is important to note that strict adherence to the protocol, including agreements with the patient achieved through applying nursing knowledge, such as theories, is essential to attain satisfactory results.

Among the protocols that have used extracellular matrices to manage chronic wounds, those obtained from sheep collagen are the most widely used. However, studies on their effectiveness show contradictory results. Some show complete wound closure even at lower than usual costs in 20 weeks, while others show worsening of the wound and reopening of new perilesional lesions. In this regard, the reported cases showed complete closure in 8 weeks, and none presented adverse events related to the protocol applied. The time factor in a protocol such as this is important, given the patients' conditions, who have limited access to resources to attend a care center and may therefore abandon prolonged treatment. About this, the protocols that have shown greater efficacy in a shorter time are those managed with the Oasis® matrix. However, the average wound healing time is 55 % in approximately 12 weeks. In this regard, the research group found a notable improvement in the results related to healing time and the number of successful cases using the protocol, which had a maximum duration of 8 weeks.

Different treatments are on the market for managing chronic wounds, but they lack a complete description or the support of a standardized nursing protocol. One of the few studies conducted by nurses in Brazil on a patient with similar characteristics showed wound closure in 97 days with calcium alginate treatment. However, hydrocolloids were used in addition to a longer intervention time, which may mean increased costs. In this study, nurse-patient interaction was not evident, which may limit the scope of such management.

The present study showed complete wound closure within a short period, which is also significant in terms of the efficient use of health resources. This has been reported by the institution where the patients were treated as a great motivation to continue

with this protocol in first-level public institutions, in a context such as ours, where social inequality poses a challenge to providing comprehensive care. This result would not have been evident without the theoretical support of nursing theory and the nursing process, which allow us to evaluate the impact that can be achieved as a discipline and which must be made evident. An agreement in which the patient commits is essential to gain acceptance and adherence to any care protocol, and even more so for those that require significant patient participation.

In the future, it is recommended that a larger number of cases be described using this protocol to thoroughly evaluate the characteristics of wound healing and its impact on wounds originating from other pathologies.

CONCLUSIONS

The new healing protocol that integrates the nursing process with the application of an extracellular matrix proved to be an effective tool for closing chronic wounds quickly. It is essential to highlight that the application of symphonic theory in nursing practice in the wound clinic leads to a change in the perspective of both the healthcare professional providing care and the patient receiving it, allowing the goals set jointly to be achieved.

ETHICAL ISSUES

The wound healing protocol was implemented following approval by the ethics committee of the San Juan de Girón Hospital and the Cooperative University of Colombia.

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CONFLICT OF INTEREST

None.

AUTHOR CONTRIBUTION

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