



## HOME VISIT AS A TOOL FOR PROMOTING THE HEALTH THE DIABETIC WITH AN AMPUTATED FOOT

VISITA DOMICILIAR COMO FERRAMENTA DE PROMOÇÃO DA SAÚDE DO PÉ DIABÉTICO AMPUTADO

VISITA DOMICILIARIA COMO HERRAMIENTA DE PROMOCIÓN DE LA SALUD DEL PIE DIABÉTICO AMPUTADO

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### ABSTRACT

**Objective:** to describe the experience of the daily home visit to change dressing in amputation of four toes due to complications of diabetic foot, indicating successes and limitations. **Method:** qualitative, descriptive study, type of experience report. The observations and data produced were systematized and analyzed, from the literature consulted in Lilacs and Scielo. They participated in the experience, with the user and their family, a nurse faculty and Nursing course academics. **Results:** a daily home visit, from Monday to Friday, contributed to the reduction of the traumatic wound under 5% papain use over a period of two months, in addition to establishing linkage and strengthening of information in health education. **Conclusion:** the experience of daily bonding and holistic Nursing care for a vulnerable patient was an enriching experience for academics who, rather than improving techniques and consolidating knowledge, learned about the indispensable social being that is the nurse. **Descriptors:** Primary Health Care; Home VISIT; Diabetic Foot; Amputation; Old Man; Papain.

### RESUMO

**Objetivo:** descrever a experiência da visita domiciliar diária para a troca de curativo em amputação de quatro pododáctilos decorrente de complicações de pé diabético, indicando êxitos e limitações. **Método:** estudo qualitativo, descritivo, tipo relato de experiência. As observações e dados produzidos foram sistematizados e analisados a partir da literatura consultada na Lilacs e Scielo. Participaram da experiência, com a usuária e sua família, uma docente enfermeira e acadêmicos do curso de Enfermagem. **Resultados:** a visita domiciliar realizada diariamente, de segunda a sexta-feira, contribuiu para a redução da ferida traumática sob o uso de papaína a 5% em um período de dois meses, além do estabelecimento de vínculo e fortalecimento das informações em educação em saúde. **Conclusão:** a experiência do vínculo diário e da assistência de Enfermagem holística a uma paciente em situação de vulnerabilidade foi enriquecedora para acadêmicos que, muito mais que aprimorar técnicas e consolidar conhecimentos, aprenderam sobre o ser social indispensável que é o enfermeiro. **Descritores:** Atenção Primária à Saúde; Visita Domiciliar; Pé Diabético; Amputação; Idoso; Papaína.

### RESUMEN

**Objetivo:** describir la experiencia de la visita domiciliar diaria para el cambio de curativo en amputación de cuatro pododáctilos resultantes de complicaciones de pie diabético, indicando éxitos y limitaciones. **Método:** estudio cualitativo, descriptivo, tipo relato de experiencia. Las observaciones y datos producidos fueron sistematizados y analizados, a partir de la literatura consultada en Lilacs y Scielo. Participaron de la experiencia, con la usuaria y su familia, una docente enfermera y académicos del curso de Enfermería. **Resultados:** la visita domiciliar realizada diariamente, de lunes a viernes, contribuyó a la reducción de la herida traumática bajo uso de papaína al 5% en un período de dos meses, además del establecimiento de vínculo y fortalecimiento de las informaciones en educación en salud. **Conclusión:** la experiencia del vínculo diario y de la asistencia de Enfermería holística a una paciente en situación de vulnerabilidad fue una experiencia enriquecedora para académicos que, mucho más que perfeccionar técnicas y consolidar conocimientos, aprendieron sobre el ser social indispensable que es el enfermero. **Descritores:** Atención Primaria de Salud; Las Visitas a Domicilio; El Pie Diabético; Amputación; Edad; Papaína.

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## INTRODUCTION

The Supervised Curricular Internship (SCI) is a fundamental component in higher education courses, according to the laws that govern this country. As an integral part of the curriculum, it provides an approximation between theory and practice, as well as the reality of the field of professional practice and social experience, providing the experience of proving the aspects that involve their work. In addition, the practice of the internship allows, the student, to take political/social awareness of his/her performance and to feel belonging to the process of social construction of his profession, including investigative practices for the strengthening and the scientific construction of knowledge.<sup>1-2</sup>

The experiences in the curricular stage allow the reconstruction of learning and, in particular, Primary Health Care (PHC), allow (re) valorization of health promotion and prevention actions as a way to overcome the biomedical model that still persists and excludes large population groups. APS proposes the Family Health Strategy (FHS) to reorganize the health system in which it is the first level of attention and model of change in the practice of healthcare actions of health professionals.<sup>3</sup>

APS implies innumerable activities to fulfill its principles and attributes, among these, a home visit takes place, a practice that became indispensable in Brazil with the implementation of the new health model, focusing on the promotion of individual and collective health. It is an instrument of health care *in loco* that allows to know the reality of the individual and the family, strengthens links and acts from the promotion of health to the rehabilitation of diseases and illness.<sup>4</sup>

The home visit covers a number of objectives, from providing care to the patient at home, identifying risk factors (individual and family) and checking the existing family support network. Home care for a patient with diabetic foot implies full attention to all the factors that influence the recovery of the complication in question. Diabetic foot is the term used to denote changes and complications that occur, either alone or in combination, in the lower limbs in patients with Diabetes Mellitus (DM). The increasing need for control and prevention of such complications imply good disease control and preventive care, with relatively simple measures of patient care.<sup>4-5</sup>

The chronic complications that occur with the advancement of Diabetes Mellitus, such as vasculopathy and/or peripheral vascular

insufficiency, cause dysfunctions that increase the chances of infection of lesions and, consequently, the amputation of the diabetic foot. In Brazil, approximately 85% of amputations occur in the lower limbs and can be avoided by adequate diabetes control, early detection of lesions, recognition of cases requiring care in the secondary/tertiary network, and general measures of prevention and linkage of DM patients.<sup>6</sup>

When considering the relevance of actions to prevent amputation of diabetic foot, home visit as a strategy to create bond and integral assistance to the needs of the user of the health service, as well as the actions of health education with the user/family, the in this context, delineates strategies that support a process of practical, critical, reflexive and social learning.

## OBJECTIVE

- To report the experience of the daily home visit to change dressing in amputation of four toes due to complications of diabetic foot, indicating successes and limitations.

## METHOD

This is a descriptive study about a daily home visit to evaluate the wound from amputation of the four toes in the right diabetic foot and exchange of occlusive cover, primary and secondary, with 5% papain.

The experience occurred in a neighborhood of the municipality of Aracaju/SE, located in the third health region and attached to a Family Health Unit (FHU). The home visits occurred during the Supervised Curricular Internship II (SCI II) of Tiradentes University (TUNI) allocated in the curricular grid of the tenth period of the Bachelor Nursing course, in the evening shift, from Monday to Friday, in the academic semester 2016.1. An elderly woman, who received direct care in the home visit, a first-degree relative, Nursing students, who carried out health education actions, prevention of new wounds, exchange of occlusive coverage and promotion of the independence of the user/family binomial participated in this experience, under the supervision and guidance of a nurse practitioner, a professor at the Institution of Higher Education (IHE) mentioned above.

Participant observation and health education were used during daily meetings that lasted, on average, 30 minutes. It was also adopted the review of medical records to collect relevant information about the user, besides the photographic record and the daily

Nursing evolution of the home visit and procedures performed.

The literature review for the research basis, was carried out from November/2016 to March/2017, based on LILACS (Latin American and Caribbean Literature in Health Sciences) and Scielo (Scientific Electronic Library Online) Primary health care, Home visit, Diabetic foot, Amputation.

Because this is a single case experience report, characterized by an unplanned field observation situation, without a research project or previous objective, there is no way to obtain, prior approval, from the Research Ethics Committee. In case of three or more case reports, there is a case series configuration and the need for approval by the Research Ethics Committee.<sup>7</sup> However, this manuscript preserves the identification data of the participants, as recommended by Council Resolution 466/12 National Health Service and did not cause damages, of any nature, to the same.

## RESULTS

The elderly woman diagnosed with type 2 DM 15 years ago, a widow, lived alone in her home in a municipality in the interior of the State of Sergipe. She reported suffering an interdigital ringworm in toes of the right foot, performing herbal treatment without evaluation and guidance of a qualified professional. After two weeks, he noticed an unpleasant smell and sought care at the Family Health Unit of the municipality. After diagnosing toenail necrosis, the patient was referred to a referral hospital in the State capital to assess the need for amputation.

The amputation surgery was performed with success and accompanied, however, following the expected postoperative effects: pain during daily changes of dressing with 5% papain, with persistence after the procedure, on average, for one hour, even with the use of analgesic prescribed by a physician, an account of phantom limb related pain and the anguish exposed when seeing the deformity in his foot, symbol of freedom of the individual, of coming and going, of physical independence.

The 5% papain, excellent indication and prescription of a high-complexity reference physician who followed the evolution of the case in monthly consultations was a *sine qua non* condition, together with glycemic control, balanced diet and use of oral hypoglycemic agents (metformin 850 mg, one tablet a day, and glibenclamide 5 mg, two tablets daily) for the successful healing of post-amputation

wound. Dressings with papain solutions were performed once a day at the beginning of the afternoon training sessions at most meetings and at the end of the morning training period, when necessary, with prior cleansing of the lesion with saline solution at 0.9% by jet; application of sterile gauze soaked in papain solution for use on the lesion; closure of the bandage wrapped in bandage and fixed with adhesive tape to avoid exposure of papain to air and light, preventing burns and neutralization of the enzyme. Although, ideally, the exchange of dressing with papain should occur every 12 hours, it was not possible to attend to this indication due to the demand of the other activities performed by the teaching nurse and Nursing academics, lack of nurse in the FHU due to the strike, and family unavailability for strict training for the use of papain.

The hallux of the left foot had a fissure of about one centimeter and onychomycosis. Attention was also given to these problems and insistent health education about the importance in treating and preventing further amputation in the lower left limb. Family members were always invited to observe the exchange of dressings and the practice of health education, clarifying doubts and myths.

Home visits occurred every Monday from Monday to Friday, and lasted, on average, 30 minutes, with meetings at the weekend, conducted by the teacher. These moments made it possible to know the socioeconomic reality, family/social support, unique needs, materializing the discourse of integrality and humanization in health. The family's financial resources, were limited, but there was emotional support and concern about wound healing, feeding care, medication scheduling, cleaning and ventilation of the environment, comfort of the elderly, and others that are only observed when there is interaction *in loco*.

The meetings became pleasant, the assistance was provided with technical-scientific rigor and the user was seen as a social, holistic being that has several needs. There was also follow-up by the tertiary level of complexity of the health system, which contributed to the healing success in a short time. However, there was no communication between referral and referral professionals through reports or other specific forms.

Experience is considered to have limitations as to its unfolding, since it was not possible to follow the total wound healing due to school holidays, as well as to assess the permanent awareness of the wearer and the family about the necessary foot care. In

addition, the dressing change was performed once a day, which does not meet the exchange recommended every 12 hours when using papain, which possibly caused delay in the healing process.

However, the bond created with the family brought the long-awaited response: healing with good epithelization in two months of follow-up, an involution of the initial traumatic process from about eight centimeters to about 3.5 centimeters, on average, footwear for resumption of life and care with the left foot, preventing future amputation.

## DISCUSSION

Primary Health Care is an enriching training for students who, in fact, experience the bond with the user, the first access to the health system, the integrality, the territorial sanitary responsibility of the populations, among other aspects. The organization of the municipality of Aracaju in eight health regions facilitates the view of the student about the territorialization and actions of health surveillance, thus strengthening the nurse, being active in PHC as a social actor who manages and provides assistance to specific population groups, according to proposal of the Ministry of Health, through various activities, from the Nursing consultation at the Family Health Unit to the home visit.

The specificity of the Supervised Curricular Stage needs to be preserved as a scenario of the formation process of the subject with critical awareness about the public sphere. Therefore, ECS is not only the medium for theoretical-practical articulation, knowledge of professional experience, approximation of the social reality of the subjects; it is an axis that integrates the whole course and allows the participation of the academic as a professional member of the institution and committed to society in its historical and political issues.<sup>1</sup>

Old age influences the onset of chronic complications of diabetes, which is a risk factor that contributes to the etiology of the insensitive and ischemic feet, that is, vulnerable to infections, which are manifested by ulcers, resulting in diabetic foot. Such complications, especially in the lower extremities, have become a significant health problem, with associations that predispose or aggravate foot injuries, such as neuropathy and peripheral arterial disease. Such conditions, associated with the patient's advanced age and duration of diabetes, lead to infection and amputation. For the prevention of such outcomes, effective health

actions in foot care, associated with the stimulation of self-care, interdisciplinary care and health education, could prevent 44% to 85% of amputations.

The social representation of the feet for the subjects is contributed in a relation of independence, autonomy and safety of the body, fundamental for locomotion. Healthy foot expresses social thinking of its natural walking function and the disruption of this benign condition produces Diabetes-related stigmas that frame the behavior of the subjects due to the shock of the social aesthetic pattern caused by deformations and injuries.<sup>10</sup>

The healing of wounds in patients with Diabetes requires greater attention due to the morphological alterations of the blood and neurotrophic vessels, with consequences for the tissue repair process, especially in the second phase of the cicatricial process where granulation tissue formation, the neovascularization, the proliferation of fibroblasts and matrix production of connective tissue. Papanin, an enzyme extracted from papaya latex *Carica papaya*, has been widely used in the aid of cicatricial processes due to the acceleration of the growth of tissue granulation and reepithelialization, proteolytic, bactericidal and bacteriostatic action in devitalized and infected tissues, with low cost and less aggressiveness to normal tissue.<sup>11</sup>

The World Health Organization and the International Diabetes Federation draw attention to this problem and state that more than half of all amputations could be prevented with adequate detection and care. Effective health actions on foot care, for the prevention of diabetic foot, could prevent 44% to 85% of amputations. Added to this is the stimulus to self-care, interdisciplinary care and health education. Small investments in prevention and education can mean less amputations, an increase in the quality of life and a considerable reduction in costs with the health system.<sup>12</sup>

Therapeutic education empowers patients and the nucleus of family support in the treatment and control of the installed pathology and prevention of possible complications through sensitization to make new decisions and preventive measures. It is a *sine qua non* to include family members and/or third parties in educational practices, since many diabetic patients use their help for daily care, which consequently produces a positive impact on the quality of life of the diabetic.<sup>13</sup>

The home visit aims to meet the different health needs, from the infrastructure conditions, such as housing, hygiene and sanitation, to the health care of families, allowing a closer approximation to the determinants of the health-disease process. Therefore, it is a labor instrument of nurses and Community Health Agents (CHA), performed in a systematized way from the planning, execution, registration and evaluation.<sup>14</sup>

Papain is a potent coating that considerably reduces the initial characteristics of the lesions, such as the amount of secretion, exudate, fibrin, edema, necrotic tissue and their dimensions, especially in the contours of the borders in relation to the wound bed after treatment. In addition, it stimulates profuse the formation of granulation tissue.<sup>15-16</sup>

## CONCLUSION

The 72-year-old woman, diagnosed with type 2 DM 15 years ago, a widow, lived alone at her home in a municipality in the interior of the State of Sergipe. She reported suffering an interdigital ringworm in toes of the right foot, performing herbal treatment without evaluation and guidance of a qualified professional. After two weeks, he noticed an unpleasant smell and sought care at the Family Health Unit of the municipality. After diagnosing toenail necrosis, the patient was referred to a referral hospital in the State capital to assess the need for amputation.

The amputation surgery was performed with success and accompanied, however, following the expected postoperative effects: pain during daily changes of dressing with 5% papain, with persistence after the procedure, on average, for one hour, even with the use of analgesic prescribed by a physician, an account of phantom limb related pain and the anguish exposed when seeing the deformity in his foot, symbol of freedom of the individual, of coming and going, of physical independence.

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