

**DIABETIC FOOT ULCER: REPORT OF EXPERIENCE OF TREATMENT IN HOME HOSPITALIZATION**

**ÚLCERA DE PÉ DIABÉTICO: RELATO DE EXPERIÊNCIA DE TRATAMENTO EM INTERNAÇÃO DOMICILIAR**

**Amanda Cibele Gaspar dos Santos<sup>1</sup> \* Caren Leticia de Souza Milani<sup>2</sup> \* Fernanda Matheus Estrela<sup>3</sup> \* Rose Ana Rios David<sup>4</sup> \* Darci de Oliveira Santa Rosa<sup>5</sup> \* Tamires Jesus Sousa<sup>6</sup>**

**ABSTRACT**

**Aim:** To report the experience of the treatment of diabetic foot ulcers performed at home in the city of Salvador Bahia in Brazil and to portray the importance of nursing care in a systematic way for a good prognosis of the injury. **Methods:** Descriptive study, of the experience report type, which presents the treatment of diabetic foot ulcers carried out at home in the city of Salvador Bahia over a period of 26 weeks. **Results:** Initially, the lower limb was inspected and the lesion was evaluated to identify its characteristics and to select the coverage. It was used as primary cover: 0.2% polyhexamethylene biguanide compress (PHBM) with change every 48 hours and Hydrogel with alginate with change every 48 hours. The complete epithelialization of the lesion occurred during 26 weeks of nursing follow-up. **Conclusion:** The importance of comprehensive care during hospital care, as well as the monitoring of the user and the wound at home by the nursing team, as well as the continuing education offered to this patient, contributed to the effectiveness of the treatment and the quality of care. assistance provided.

**Keywords:** Diabetes Mellitus. Diabetic Foot. Wound Healing

**RESUMO**

**Objetivo:** Relatar a experiência do tratamento de úlcera de pé diabético realizado em domicílio na cidade de Salvador Bahia no Brasil e retratar a importância da assistência de enfermagem de forma sistematizada para um bom prognóstico da lesão. **Métodos:** Estudo descritivo, do tipo relato de experiência, que apresenta o tratamento de úlcera de pé diabético realizado em domicílio na cidade de Salvador Bahia no período de 26 semanas. **Resultados:** Inicialmente foi realizada a inspeção do membro inferior e avaliação da lesão para identificar as suas características e para seleção da cobertura. Foi utilizado como cobertura primária: compressa de polihexametileno biguanida (PHBM) 0,2% com troca a cada 48 horas e Hidrogel com alginato com troca a cada 48h. A epitelização completa da lesão aconteceu em 26 semanas de acompanhamento de enfermagem. **Conclusão:** A importância do cuidado integral durante a assistência hospitalar, bem como, do acompanhamento da usuária e da ferida no âmbito domiciliar pela equipe de enfermagem, assim como a educação continuada oferecida a esta paciente, colaboraram para a eficácia do tratamento e a qualidade da assistência prestada.

**Palavras-chave:** Diabetes Mellitus. Úlcera Diabética do Pé. Cicatrização.

<sup>1</sup> Nurse. Especialista em enfermagem Oncológica; Mestranda da Universidade Federal da Bahia. Docente do Centro Universitário Maurício de Nassau. Orcid: <https://orcid.org/0000-0001-9477-3757> Email: [acibelegaspar@gmail.com](mailto:acibelegaspar@gmail.com).

<sup>2</sup> Enfermeira. Especialista em Unidade de Terapia Intensiva Adulta e Pediátrica pela FACIMED/ RO. Emergencista pela modalidade residência em Urgência/Trauma UNESC/ RO. [milani.caren@hotmail.com](mailto:milani.caren@hotmail.com). ORCID 0000-0002-7822-1247.

<sup>3</sup> Nurse. Doutora em Enfermagem e Saúde. Docente da Universidade Estadual de Feira de Santana. Orcid: <https://orcid.org/0000-0001-7501-6187>. E-mail: [nanmatheus@yahoo.com.br](mailto:nanmatheus@yahoo.com.br).

<sup>4</sup> Nurse Doutora em Enfermagem. Docente da Universidade Federal da Bahia. Orcid: <https://orcid.org/0000-0003-1316-2394>. E-mail: [rariosdavid@gmail.com](mailto:rariosdavid@gmail.com)

<sup>5</sup> Prof<sup>a</sup> Titular, Doutora em Enfermagem, Pós Doutora em Bioética/ Polo Açores-PT . Lotada na Coordenação Acadêmica de ENF-UFBA/ Prof Permanente PPGENF /UFBA. Líder do Grupo de Pesquisa Educação, Ética e Exercício da Enfermagem - EXERCE - UFBA/CNPQ. ORCID: 0000-0002-5651-2916

<sup>6</sup> Nurse. Mestranda pela Universidade Federal da Bahia. Orcid: <https://orcid.org/0000-0003-4141-9097>. E-mail: [tamires.sousa.jesus@gmail.com](mailto:tamires.sousa.jesus@gmail.com).

## INTRODUCTION

It is estimated that worldwide the population of patients with diabetes mellitus (DM) is approximately 387 million and that it will reach 471 million in 2035. About 80% of these individuals live in developing countries, where there is an increasing proportion of people affected in age groups younger. The index of Brazilians diagnosed with diabetes increased by 61.8% in the last 10 years, from 5.5% of the population in 2006 to 8.9% in 2016 <sup>(1)</sup>.

The risk of a diabetic to develop foot ulcers (PU) throughout life reaches about 25% and it is also believed that every 30 seconds an amputation of the lower limb occurs. It is noteworthy that about 10 to 25% of people with diabetes mellitus (DM) above 70 years of age develop lesions in the lower limbs (lower limbs) and of these, 14 to 24% progress to amputation. It is considered as a common cause of disability, since due to the possible amputation of the affected limb, it reduces the quality of life of the diabetic <sup>(2)</sup>.

Ulceration of the diabetic foot represents a medical, social and economic problem and its prevention is based on maintaining a controlled glycemic rate, performing moderate physical activity and medical monitoring with periodic annual examinations for early diagnosis. Self-examination is essential, as some patients are asymptomatic, where chilblains, cuts, calluses, cracks,

lesions, skin pigmentation changes and absence of hair should be observed <sup>(3)</sup>.

It is evident that there is a need to develop coping strategies aimed at the effectiveness of care that seeks systematic care for patients with this type of metabolic disorder, providing quality care <sup>(1,4)</sup>.

In this context, the home visit fits as one of the strategies of health actions directed to both educational and assistance care, enabling a more efficient interactive process between the members of the health team with the family, knowing the reality faced by the same, contributing for comprehensive care <sup>(5)</sup>.

Therefore, this study aims to report the experience in the treatment of diabetic foot ulcers carried out at home in the city of Salvador Bahia in Brazil and to portray the importance of nursing care in a systematic way for a good prognosis of the injury.

## CASE REPORT

A 45-year-old woman from the city of Salvador, Bahia, in home care with a history of diabetes mellitus, she is unaware of the time of the pathology, without controlling glycemic levels and without using hypoglycemic agents. Carrier of systemic arterial hypertension without control of the pressure levels, and in use of antihypertensive in an irregular way, besides smoker and alcoholic.

After perfusion of the foot with a glass fragment, it was reported by the patient in a nursing consultation that she did not notice the presence of the foreign body and after 15 days, she reported feeling a foul local odor and it was found that it came from her lower limb.

The patient reports having sought the emergency care unit and was subsequently referred to a hospital where she remained for about 20 days, as assessed by a vascular surgeon and was instructed to amputate, however, the patient refused to perform the procedure.

Initially, the inspection of the lower limb and analysis of the lesion was carried out; later, the lesion was classified according to its characteristics in order to select the appropriate cover.

The surgical debridement of the lesion was performed and after the procedure, the foot presented the following descriptions: plantar region with granulation tissue and slough points in bed, presence of exudate in a moderate amount of yellowish and serous appearance, moderate odor, adhered edges without maceration, perilesional area integrates. The conduct established after the nursing evaluation: Application of a 0.2% polyhexamethylene biguanide compress (PHBM) with change every 48 hours. Hallux necrotic tissue in all extension, used Hydrogel with alginate, changing every 48 hours. The

actions taken were authorized by the patient in relation to the maintenance of blood pressure and blood glucose levels.

During the nursing care provided, guidance was provided on the importance of a balanced diet, proper use of medications, and the patient was asked to return for the services she was not attending after the appearance of the injury.

For the hygiene of the lesion, a warm saline solution was used in a jet, and then a solution with polyhexamethylene biguanide, in addition to drying the edges, used in the bed of the plantar region, compressed with PHBM and Hallux with Hydrogel and in barrier cream edges, and preceded by non-compressive bandaging. with crepe bandage. The exchange took place every 48 hours.

The patient's skin follow-up took place within 48 hours, showing from this moment the characterization and evolution of the lesion. The skin was evaluated through discussions between researchers about dressings and materials to be used for its prevention. The complete epithelialization of the lesion occurred in 26 weeks of follow-up of the lesion.

**Figure 1** – Evaluation of the Injury carried out in February. Salvador, BA, Brazil, 2019.



**Source:** Personal file

**Figure 2** - Evaluation of the Injury carried out in February. Salvador, BA, Brazil, 2019.



**Source:** Personal file

**Figure 3** - Evaluation of the Injury carried out in February. Salvador, BA, Brazil, 2019.



**Source:** Personal file

**Figure 4** - Evaluation of the Injury carried out in March. Salvador, BA, Brazil, 2019.



Source: Personal file

**Figure 5** - Evaluation of the Injury carried out in May. Salvador, BA, Brazil, 2019.



Source: Personal file

**Figure 6** - Evaluation of the Injury carried out in June. Salvador, BA, Brazil, 2019



Source: Personal file

**Figure 7** - Evaluation of the Injury carried out in August. Salvador, BA, Brazil, 2019.



**Source:** Personal file

## DISCUSSION

We can observe that in the 4th week of treatment the phlogistic signs were reduced and the granulation tissue started to be observed. The patient was instructed on the necessary local care, how to avoid possible local trauma and hydration of the skin in order to avoid the formation of new lesions.

The treatment with the coverings lasted for 26 weeks, however, from the 16th week onwards, 100% granulation tissue was observed, and in the following weeks, there was a decrease in the wound diameter.

Diabetic foot ulcers are the most frequent causes of prolonged hospitalizations and one of the main causes of non-traumatic lower limb amputations, with a high social and health burden. Thus, the intensive intervention of health professionals with patients with DM is necessary not only to

prevent the appearance but also to mitigate the evolution of the diabetic foot <sup>(1)</sup>.

Health education in groups of people living in the same location tends to show similarity between socioeconomic and cultural factors in order to facilitate the adoption and exchange of strategies to overcome difficulties, expanding the autonomy of users and their co-responsibility in managing their health, and resulting in better living conditions. It is worth noting that for educational activities to be effective and influence adherence to the treatment of users, it is also necessary to establish bonds of trust between professionals and users <sup>(6)</sup>.

Nursing as a protagonist in the treatment of injuries must know the different primary and secondary coverings for wounds in order to always choose the best option and thus

contribute to the planning of assistance to individuals with wounds <sup>(7)</sup>.

Nurses have a fundamental role in the care process, however, they must rethink about their practices and academic training, with

## CONCLUSION

It is emphasized with the present study that many of the patients followed up at home, have a lack of control of their glycemic condition, causing other complications, such as diabetic foot.

Nursing as a protagonist in the treatment of injuries must have technical and scientific knowledge in the field of dermatological nursing, as well as in the performance of its educational role at home.

The description of this case report contributes to the learning of nursing students and nurses in the wound healing process, where a positive outcome was obtained in the

regard to nursing performance and actions, seeking to identify early the risks and complications that affect the individual with diabetic foot <sup>(8)</sup>.

epithelialization of the lesion, with the care plan prepared by nursing.

We emphasize the importance of constant surveillance of the patient with a susceptibility to developing diabetic feet, thus observing the risk factors, developing health education activities that culminate in prevention and self-care, and, in other cases, the appropriate intervention for the care of injuries. and control of blood glucose levels.

## REFERENCES

1. Brandão, MGSA. Processo de enfermagem em um paciente com pé diabético: relato de experiência. Revista Rede de Cuidados em Saúde [Internet]. 2020 [access on Mar 12 2021]; 14(1): 52-61. Available at: <http://publicacoes.unigranrio.edu.br/index.php/rcs/article/view/4959/3209>
2. Cubas, MR, Santos, OM, Retzlaff EMA, Telma HLC, Andrade IPS, Moser ADL et al. Pé diabético: orientações e conhecimento sobre cuidados preventivos. Fisioter. Mov. Curitiba [Internet]. 2013 [access on Apr 12 2018]; 26(3):647-655. Available at: <http://www.scielo.br/pdf/fm/v26n3/a19v26n3.pdf>
3. Bandeira F, Mancini MC, Graf H, Griz L, Faria M, Castro ML. Endocrinologia e Diabetes, 3ed. Rio de Janeiro: Medbook, 2014.
4. Dias JJ, Santos FLLSM, Oliveira FKF, Gois CFL, Futuro MPR. A Visita Domiciliar como Ferramenta para Acompanhamento de Amputação de Pé Diabético: Um Relato de Experiência. In: Congresso Internacional de Enfermagem. 2017.

5. Ferreira, SOO, Caldas NM, Rocha GDCC. A utilização de papaína no tratamento de ferida e a visita domiciliar como uma ferramenta para sistematização da assistência de enfermagem: relato de experiência. *Cidadania em Ação: Revista de Extensão e Cultura*, 2019; 3(1): 59-66.
6. Menezes TMO, Guimarães EP, Santos EMP, Nascimento MV, Araujo PD. Grupo educativo com dispensação de medicamentos: uma estratégia de adesão ao tratamento da hipertensão arterial e do diabetes mellitus. *Revista Baiana de Saúde Pública*, 2012; 36(1):148-158.
7. Brasil. Ministério da Saúde. Manual do pé diabético: estratégia do cuidado para a pessoa com doença crônica [Internet]. Brasília: Ministério da Saúde; 2016 [access on Nov 23 2019]. Available at: [http://189.28.128.100/dab/docs/portaldab/publicacoes/manual\\_do\\_pe\\_diabetico.pdf](http://189.28.128.100/dab/docs/portaldab/publicacoes/manual_do_pe_diabetico.pdf)
8. Dantas DV, Costa JL, Dantas RAN, Torres GV. Atuação do enfermeiro na prevenção do pé diabético e suas complicações: revisão de literatura. *Rev Cultura e Científica do UNIFACEX*, 2013; 11 (11): 1-14.

**Submission:** 2021-03-05

**Approval:** 2021-03-20

