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ORIGINAL ARTICLE

CONDUCT OF PRIMARY CARE NURSES IN THE CARE OF PEOPLE WITH DIABETIC FOOT

CONDUTAS DOS ENFERMEIROS DA ATENÇÃO PRIMÁRIA NO CUIDADO A PESSOAS COM PÉ DIABÉTICO

CONDUCTAS DE LOS ENFERMEROS DE LA ATENCIÓN PRIMARIA EN EL CUIDADO A PERSONAS CON PIE DIABÉTICO

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ABSTRACT

Objective: to know the actions of the primary care nurse in the care of people with Diabetes Mellitus (DM) regarding diabetic foot. **Method:** qualitative, exploratory and descriptive study, with 22 nurses interviewed in the Family Health Strategy. Data were produced through semi-structured interviews. For the data analysis, the Content Analysis technique, was used in the Categorical Analysis modality. **Results:** they showed that the nurses' knowledge about the care of the person with DM is partial, superficial and fragmented, not allowing adequate actions for the care, especially, in the detection of the risks for the development of the diabetic foot and to perform the evaluation of the examination of the patients. feet. **Conclusion:** it was understood that the conduct of primary care nurses, in this current model carried out in the local health system, is ineffective because nurses do not systematize, basic care to prevent complications. **Descriptors:** Nursing; Self Care; Primary Health Care; Diabetic Foot; Qualitative Research.

RESUMO

Objetivo: conhecer as ações do enfermeiro da atenção primária no cuidado das pessoas com Diabetes Mellitus (DM) referente ao pé diabético. **Método:** estudo qualitativo, exploratório e descritivo, com 22 enfermeiros entrevistados da Estratégia de Saúde da Família. Os dados foram produzidos por meio de entrevistas semiestruturadas. Para a análise dos dados, foi utilizada a técnica de Análise de Conteúdo, na modalidade Análise Categorical. **Resultados:** evidenciaram que o conhecimento dos enfermeiros sobre os cuidados com a pessoa com DM é parcial, superficial e fragmentado, não possibilitando ações adequadas ao cuidado, especialmente, na detecção dos riscos para o desenvolvimento do pé diabético e para realizar a avaliação do exame dos pés. **Conclusão:** foi compreendido que a conduta dos enfermeiros da atenção primária, neste modelo atual realizado no sistema de saúde local, é ineficaz porque os enfermeiros não realizam, de forma sistematizada, os cuidados básicos para a prevenção de complicações. **Descritores** Enfermagem; Autocuidado; Atenção Primária; Pé Diabético; Pesquisa Qualitativa.

RESUMEN

Objetivo: conocer las acciones del enfermero de la atención primaria en el cuidado de las personas con Diabetes Mellitus (DM) referente al pie diabético. **Método:** estudio cualitativo, exploratorio y descriptivo, con 22 enfermeros entrevistados de la Estrategia de Salud de la Familia. Los datos fueron producidos por medio de entrevistas semiestructuradas. Para el análisis de los datos, se utilizó la técnica de Análisis de Contenido, en la modalidad Análisis Categorical. **Resultados:** evidenciaron que el conocimiento de los enfermeros sobre los cuidados con la persona con DM es parcial, superficial y fragmentado, no posibilitando acciones adecuadas al cuidado, especialmente, en la detección de los riesgos para el desarrollo del pie diabético y para realizar la evaluación del examen de los pies. **Conclusión:** fue comprendido que la conducta de los enfermeros de la atención primaria, en este modelo actual realizado en el sistema de salud local, es ineficaz porque los enfermeros no realizan, de forma sistematizada, los cuidados básicos para la prevención de complicaciones. **Descritores:** Enfermería; Autocuidado; Atención Primaria de Salud; Pie Diabético; Investigación Cualitativa.

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INTRODUCTION

DM is considered a worldwide epidemic and a serious public health problem. It is characterized as a chronic metabolic disorder, with impaired metabolism of glucose and other energy producing substances associated with a variety of complications in essential organs for life maintenance.¹ The World Health Organization (WHO) estimates that, by 2020, the leading cause of disability and death globally will be closely related to chronic diseases, including DM.²⁻⁴

Foot complications are common among people with DM. It is estimated that 15% of people with DM develop diabetic foot, resulting in annual expenses for the Unified Health System (UHS), about R \$ 18.2 million in amputations.⁵

Diabetic foot syndrome is a neuropathic-based, clinical comorbidity induced by sustained hyperglycemia. In it, with or without coexistence of Peripheral Arterial Disease (PAD), there are biomechanical alterations that result in deformities and foot ulceration, in cutaneous or deep planes, associated with previous trauma and triggering infections.⁶⁻⁸

Studies have shown that diabetic ulcers are responsible for 85% morbidity and mortality, prolonged hospitalizations, and high hospital costs.^{7,9} Of the more frequent complications with a high prevalence rate, associated with significant costs and long-term repercussions, such as the high risk for reulceration, loss of mobility and decreased quality of life, are amputations of lower limbs, which is equivalent to 70% of cases.⁹

The Ministry of Health estimates that 50% of these cases can be prevented through continuous actions of health education for people with DM and their families, concomitant with the screening of risk factors.^{1-2,10}

In this sense, primary care plays a fundamental role in this process, since it is the main gateway to the health system, constituting a space for coordination of responses to the needs of people, their families and the community, articulating the bases of promotion, prevention and health recovery, concomitantly with the Family Health Strategy (FHS), guaranteeing the integrality of care.¹¹

As an important member of the basic multidisciplinary team of the ESF, the nurse has represented a field of growth and social recognition, being an active component in the process of consolidating the Strategy as an

integrative and humanized health policy. It is up to him, the orientation of the actions to the users, according to their needs and in the process of constructing the knowledge of the person, seeing the person in a holistic way, as an individual being, who has his own life history, his own characteristics, determinants in their functional and psychosocial capacity preserved, to be worked during the process of their recovery.¹²

One of the purposes of nurses' work in primary care is the health education of people with DM and diabetic foot care. The nurse should stimulate the development of a proactive attitude of these people in relation to their self-care in all phases of the educational process, dominating the knowledge and developing abilities that instrumentalize it for the self-care and assuming the responsibility of the therapeutic role in its life.¹³⁻⁴

In this way, it is fundamentally important to provide effective follow-up to the person with DM and the guidelines regarding complications with the feet, promotion of support groups, guidelines on glycemic control, importance of adherence to healthier lifestyle habits. Carrying out a plan of care together with the person, making the necessary negotiations and planning the targeted interventions.⁹

From this assumption for Nursing care to the person with diabetic foot, the guiding question of this study was: What are the actions of the nurse in primary care for the care of the person with DM regarding diabetic foot?

OBJECTIVE

- To know the actions of the primary care nurse in the care of people with Diabetes Mellitus (DM) regarding diabetic foot.

METHOD

Qualitative, exploratory, descriptive study using semistructured interviews based on a semi-structured script. The study was developed with 22 FHS nurses from a city located in the South of Brazil. The sample was intentional, initiated by the snowball technique, where the first participant was chosen according to the ease of access and acceptance in participating in the research, and the others were indicated by the previous participant.

The inclusion criteria were to be a nurse and work at the FHS. Those who were on leave or leave during the data collection period were excluded, who were not in the

Sousa GO de, Silva MRB, Araújo MCFF et al.

Conduct of primary care nurses in the care...

Unit at the time of the interview, who were not available for time or who did not want to participate in the study.

The data were collected through recorded interviews and, later, transcribed and performed in the period from March to June 2014. The data collection instrument was a semi-structured interview based on a script, with an average duration of 30 minutes. The interview consisted of three parts: (1) characterization - sex, age, time and location of training, training, length of service, form of joining the unit; (2) Knowledge - on diabetic foot (causes, treatments, prevention), basic materials to consult the person with diabetic foot, capacitations carried out as this theme, where knowledge was acquired; (3) Actions - frequency of consultations, reference and counter-referral, priorities in the consultation, consultation route, criterion for foot evaluation, educational activities offered, properties for patient knowledge, adherence to treatment and role of the FHS team.

In view of respect for anonymity, the participants were nominated with the letter E (nurse) and the sequential number of the interview. The project was approved in the Ethics Committee of CAAE: 26733314.9.0000.0121, with the opinion nº 544.871, of 10/03/2014. The same was presented and approved at the Municipal Health Department of the city of Florianópolis.

The collection complied with the criterion of data saturation. For the analysis of the data, literal transcriptions of the recorded interviews were carried out and later discussed during the data collection during meetings with all the authors. This iterative approach allows for discussion of emerging issues and better exploitation of data. The criterion of data saturation was respected, regarding the themes and categories.

The analysis was based on an exhaustive reading of interview transcripts, in order to find the similarities and divergences of participants' responses. For the analysis of the data, the Content Analysis technique, was used in the Categorical Analysis modality, where the questions related to each category allowed a systematic evaluation of the factors that influence the conduct of the nurses to people with diabetic foot.¹⁵

RESULTS AND DISCUSSION

During the data analysis phase, three categories related to the study theme emerged: **Characterization of primary care**

nurses - describes the profile of the nurses who participated in this study; **Nurses' knowledge about diabetic foot** - in which the pathophysiology was addressed, covering cause, treatment, prevention, the necessary materials for examining the feet and safety in attending to these people; **Nurses actions to perform care with the diabetic foot** - consists of the actions of nurses to perform care, including: steps, frequency and scheduling of consultations; dynamics of care, criteria for conducting the foot exam, priorities addressed and reference and counter-referral services.

♦ Characterization of primary care nurses

In this category will be described the information about the nurses who were part of the study the personal and professional characteristics of the same. Of the 22 participants in this study, four were male and 18, female, ranging in age from 26 to 46 years. Nineteen (19) graduated from a public university and three from a private establishment. Between 1994 and 2010, therefore, with training time of four to ten years. All entered the City Hall through a public competition, between the years 2001 to 2013, with working time in the institution from one to 13 years.

As for graduate, only one did not perform. Two are currently pursuing a Master's in Nursing. Among the specializations, are: Family Health Strategy (13); Public Health (05); Health Management (06); Emergency and Emergency Nursing (02); Cardiovascular (02); Collective Health (01); Obstetrics and Neonatology (01); Epidemiology (01); Health of the Elderly (01); Obstetrics (01); Acupuncture and Massotherapy (01); Yoga and Pilates (01); Chronic Noncommunicable diseases (01); Administration (01). This shows a diversity in the areas and respective approaches of the post-graduations, although all are directed to the health. There were nurses who attended more than one postgraduate course, which shows that the study participants sought to improve themselves professionally.

Everyone had already acted as FHS nurses elsewhere; nine worked as mid-level training teachers; seven as nurses in the different hospital areas; nine assumed managerial positions in public or private services and one worked as a nurse practitioner.

♦ Nurses' knowledge about diabetic foot

The knowledge about the topic of diabetic foot is essential for the quality of Nursing care and prevention of complications, encouraging

Sousa GO de, Silva MRB, Araújo MCFF et al.

Conduct of primary care nurses in the care...

the practice of self-care and giving the necessary guidelines. In this study, it was evidenced that the knowledge is consolidated for the majority of participants:

So the main factor is uncontrolled glycemia. It is both the issue of neuropathy and the circulatory problem. [...] The symptoms are numbness in the feet, pain, the absence of wrists, foot more purplish, with much, there are people who feel burning. [...] Always work hard with health education, blood glucose control, these foot care issues, proper shoes, proper socks, do not walk barefoot, such as trimming the nails. (E10).

However, some showed difficulties to talk about the topic, avoiding the theme, or discussing other issues more frequent in their daily work.

I know a little, because I do not have much experience despite being in the family health area we always end up focusing on one point, but what I do know is that people who have diabetes have difficulty healing, they also have problems in relation vascular insufficiency, and the foot of the diabetic needs special care né (E13).

Similar studies, with diabetes specialist nurses, at a hospital in Hong Kong demonstrate, through a closed question instrument on the topic of diabetic foot, that the level of knowledge about this topic was compromised. It is recommended that continuing education, for these professionals, be a goal for future studies. In addition, the authors emphasize that the awareness and knowledge of health care are a fundamental tool for the provision of adequate service and minimization of occurrences of foot complications.

For the participants, the contact with the subject began at the undergraduate level, getting better throughout the practice and interest in updating as a professional, according to the speeches below:

In the university itself, in training, in graduation. And in the experience right. In living, studying, reading, because we do not stop. Has that is always updated. (E5)

One speech stated that knowledge did not begin in undergraduate academic formation:

In the beginning, we organized groups, did not come from the academic formation so specific, there began to appear demand and we began to go back, to study the protocols of the Ministry. (E15)

According to the nurses, the trainings carried out by them followed the following themes: Women's Health; Children's Health; Elderly Health; Adult Health; Mental Health; Smoking; Tuberculosis; Breastfeeding; Basic

Life Support, STD-AIDS and Diabetes. In spite of this, there were no specific training with the topic of diabetic foot, in the last five years, in the research institution.

In this context, it is important to emphasize that the process of Permanent Education in Health has contributed to improve the qualification of professionals, to standardize and systematize a service to the user with diabetes in terms of integrality, health education and the development of self-management. In addition, the Permanent Health Education, offered by the Unified Health System (UHS) is an already well-established goal for professional qualification, aiming not only to overcome deformations and deficiencies in the training of health workers, but also to contribute to the minimization of suffering and complications, and, consequently, reduce expenditures with specialized assistance.¹⁷

When questioned about the safety in the care of the person with diabetic foot, the interviewees referred to having safety:

Today I feel. I feel for the experience, right, and I always thought that I do not know what to do. I ask for an evaluation from my colleagues in medicine and in Nursing. (E1)

The other part that reported not having security in the service related not only the lack of a more in-depth knowledge, but the great demand in the service in other areas and the lack of capacity as a reason:

I feel deficient, I do not feel safe, it is perhaps because of the lack of specific capacity of the diabetic foot, to monitor and to frequently use the instruments, I feel quite doubtful about the diabetic foot. (E11)

No, I think it's a question of mine, you know, I did not give much focus to that [...]. I think that the demand ends up involving us and then the agent ends up not studying certain things, as agent studies others (E13).

It is important for professionals to be able to join theory to practice, based on scientific and ethical principles, expanding knowledge and making care more organized and structured, thus, facilitating Nursing work.¹⁷

Participants, in talking about diabetic foot, associated it with pain; decompensated diabetes; absence of pulses and hairs and circulatory alterations; lack of foot care and lack of hygiene; knowledge of the person about his illness; staining, burning and numbness related to neuropathic manifestations and injury.

It was observed in the speeches of the subjects, that the decompensated diabetes,

Sousa GO de, Silva MRB, Araújo MCFF et al.

the neuropathy and vascular problems, were the most evidenced, being one of the first indications that something is not going well. Since neuropathy and vascular alterations are factors well documented in the literature on the main causes of diabetic foot.^{1,6,9,16}

In addition, it has been demonstrated that metabolic control is also a factor that compromises the adequate management of the diabetic foot, exposing the patient to an unpleasant outcome and pointing out several problems in the basic care provided to this population.⁹

Regarding this, in the perception of the subjects to these alterations, an influence of the biomedical aspect was perceived, which reinforces the physical characteristics of the foot disease. Forgetting that the human being should be seen in all its fullness of feelings, life experiences built throughout its history and the relationships with the social environment in which they are inserted.

The treatment for the Diabetic Foot should be guided by a comprehensive care model, encompassing techno-scientific aspects related to procedures and behaviors, and educational aspects, with a facilitating instrument for singular and collective training.¹⁸

Within this integral model was highlighted: the qualification of risks; research; drug treatment for neuropathy, which involves pain relief and skin care.¹⁹ Appropriate treatment of wounds, related to local care, relief of compression and ulcer protection, treatment of infections by appropriate coverages, medication, or (debridement), frequent inspection of the wound and the use of suitable dressings.^{6,20}

In addition, surgical treatment of sequelae (deformities, callus, ulcer and foot of Charcot), treatment for diabetic macroangiopathy, involving the use of vasodilators and percutaneous angioplasty. In addition to rehabilitation, inserted both in physical aspects, in the use of exercises to ameliorate neuropathic and vascular deformations and dysfunctions, and in the adaptation of prosthesis, in the case of amputation.¹⁹

Some nurses, when asked about the treatment of diabetic foot, emphasized: glycemic control, feeding, physical activity, insulin and hypoglycemic use, and treatment of the lesion.

However, it was observed that the subjects' discourse mostly reflected, the association of the diabetic foot only with the injury, opposing a holistic view and the performance

Conduct of primary care nurses in the care...

of actions directed by the nurse to stimulate the person to take care of himself or the environment, in order to regulate its own functioning according to its personal objectives, showing again the biomedical vision, which reinforces the division of the human being into different parts.

We are advised to inspect, keep glucose as close to normal as possible, and are always controlling diet, walking, and physical activity. Treatment is the use of insulin, hypoglycemic agents, and some ointment for circulation or medicine for circulation. In addition to physical therapy, everything the diabetic can use as an alternative treatment [...]. Now for the diabetic injury there are several, depends on the state of the injury, right. If it is early, if it already has necrosis, it all depends on the injury. What is the dressing, to accompany. (E1)

Well, treatment depends on the situation. If it is in the initial stage it can be either medicamentous or a specific dressing, or in an extreme case an amputation, depending on the need. (E7)

For the treatment of the wounds is always the Dersani, does not happen much of that when it has infection goes there and uses the antibiotics so the experience that I had is this one. The dressings that we will evaluate. (E17)

One subject evidenced in its practice an integrated treatment.

The treatment in fact, not only of the diabetic foot, but of the patient with a whole. So, so when they come in the consultation, usually what agent does, are general questions, both the everyday life of the patient, family matter. Specific questions, such as examinations, medication, the use of insulin, as does the application of insulin. Hence the care with the feet. Everything, which can happen with the diabetic foot. As I told you, agent evaluates the whole diabetic, which may have generated the diabetic foot. (E8)

Nurses, when asked about diabetic foot prevention, have pointed out in all speeches that prevention is related only to aspects of foot care such as hygiene, hydration, proper footwear, nail cutting and water temperature.

This evidences ignorance on the subject, since other important aspects are well documented, in the literature when it comes to prevention of diabetic foot. These include: maintenance of glycemic control; regular examination of the feet; risk classification and therapeutic education aiming at self-care; absolute smoking restriction; investigation of the socioeconomic aspect that will reflect on quality of life; visual aspects; nutrition;

Sousa GO de, Silva MRB, Araújo MCFF et al.

exercise to improve movement; care of domestic animals and insects; and foot care related to hygiene, hydration, nail cutting, shoes and appropriate means, callosities and mycoses.^{6, 21}

The guidelines are adequate footwear, foot revision frequently, even as a point of self-care of the patient himself, in addition to glycemic control all the time [...]. Hydration of the feet to maintain the integrity of the skin. (E2)

Prevention, then we take the exam and always work a lot with health education [...]. These issues of proper shoes, proper stocking ne, not walking barefoot, is like cutting your nails, even if you have not yet any sign. (E10)

A prevention issue, I think that focuses a lot on the professional assessment of the risk issues that involve that foot, and I think it works in the context of preventing sores ulcers. (E13)

In relation to preventing the person with diabetes to avoid a wound we usually advise our patients to examine the feet, between the fingers, be careful of the temperature of the water when washing these feet, the use of suitable footwear is very important, preferably more open shoes, is always taking care also with the issue of moisture inside this shoe, is always examining the foot, with regard to cutting the nails, do not sanding those nails, do not cut too close to the skin, in consultations with us, we're examining the wrist, we're doing this examining that foot. (E12)

Prevention is to teach the person to take care of himself, to know the foot, to have a good hygiene between the toes, to wash daily, to dry dry, the well trimmed nails and to respect the cut of them in order not to get stuck in the end. It is a person to wear the proper footwear, not to cause calluses, and the person to examine his foot daily to see if there is any change, because if there is any change, sensitivity, it may be that he does not feel and will have to use visual resources, to identify any possible changes and to correct what will be causing them. (E16)

When questioned about the supply of the basic materials needed for the examination of the feet offered by the UHS, all the interviewees report that the Municipality of Florianópolis does not offer this type of material.

When asked if they knew the basic materials for examining the feet, most of them said they did not know, and that they take the exam by adapting other materials.

We do not have that monofilament, but I do the needle test, with the key, I adapt it somehow, to see if the sensitivity is maintained try to pass a pencil, a crank,

Conduct of primary care nurses in the care...

a little piece of line [...]. I know only that monofilament.

For the sensitivity test, I think you can use cotton, needle, these things, right? These specifics SUS does not offer. Then I can not tell you whether it exists either. (E14)

No. As far as I know, my unit does not. I've seen in HU when I was in college I do not know the right name, I remember I had the one to observe the patellar reflex. I even had to see the sensitivity there as well, I do not remember the name of the instruments, but I know that there is a material for that, in the unit there is not and I also think that the city hall does not provide.

So monofilament I bought, of course the cotton I use also, hence the, the toothpick I got, but only and that's it. (E10).

According to the Brazilian Society of Diabetes (SBD), the materials recommended for examining the feet are: Semmes Weinstein's 10-gram filament, which detects thick fiber changes and evaluates plantar protective sensitivity; 128 Hz diaphragm and hammer, evaluate the thick, sensitive and motor fibers; the Pin or Palito evaluates the fine and sensitive fibers; the Biotensiometer quantifies the threshold of the vibratory sensitivity and the Podoscope, which allows the visualization of the effective plantar contacts in the soil. Semmes-Weinstein's 10 g monofilament was used as a marker of risk of ulceration. The sensitivity of this simple test approaches 100% and its specificity, is 80%.²²

The identification of people at risk, through the systematic screening of the diabetic foot, can lead to a marked decrease in the number of lower limb amputations, resulting in evident gains in health and quality of life. This screening has to be carried out first by systematic observation of the feet of all people with diabetes, and can follow the Wagner Scale as an evaluation standard regarding the frequency of consultations and the risk of ulceration.²³

◆ Nurse's actions to perform care

The FHS is a form of organization of the Brazilian Health System. One of its axes is the promotion of health education, with the encouragement of community mobilization, and participation in ways that effectively control social, that is, the person in need of care should be able to manage their own care at some later time. To do this, primary care professionals - who are distributed in teams with at least a physician, nurse, Nursing technicians, community health agents and oral health professionals - must work together to strengthen the primary care base, that is health education.²⁴

The Nursing consultation aims to know the person and his / her previous history, analyze their social and economic context, and their level of education, in order to evaluate their potential for self-care and health conditions.²⁴ In this way, nurses become fundamental for the encouragement and assistance to the person in the development of their plan of care, in relation to the risk factors identified during the follow-up.

According to Orem, this can be identified and performed according to the three classifications of Nursing systems explained in this theory.²⁵ It is known: the fully compensatory system, represented by the situation in which the person is not able to develop self-care actions, or when there is a medical prescription restricting their activities, where the Nursing team acts on the limitations of the patient, compensating their inability to self-care by providing support and protection. The partially compensatory system represents the situation in which both the nurse and the patient perform care measures or other actions, involving manipulative tasks or ambulation, in which the patient acts by performing some self-care measures, regulating their activities and receiving care and help from the nurse. The support-education system occurs when the person can perform, or can learn to perform therapeutic self-care measures. In this case, the person regulates the exercise and development of their self-care activities, while the nurse promotes their autonomy.²⁵

In Brazil, the National Diabetes Program is characterized by a set of health actions, being individual and / or collective, covering the promotion and protection of health; prevention of injuries; diagnosis, treatment, rehabilitation and health maintenance. At this level of attention, it is up to the multiprofessional team to provide care to the diabetic. However, it is up to the nurse professional to develop educational activities and establish strategies that will favor people's adherence to the necessary treatments.^{1,24}

Regarding the consultations conducted by the interviewees, it was reported that these are offered individually and / or in groups, and frequency depends on how it happens, whether individual or in a group.

The groups take place once a month with dynamics, usually in conversation wheels, where the subjects that the patients themselves choose as food, physical activity, use of medicines, among others, are approached and also, it is related to the group the delivery of the inputs that, in the

professionals' view, is a way to get them to participate in the meetings. As for the coordination of these groups, professionals vary and some are pharmacists, nutritionists or nurses. The other professionals, from other areas, are invited to participate in the groups where the themes are more specific, to improve the quality of the approach.

I like to work with conversation. So, I do not like to lecture because I find it unhelpful. But I like to sit down and go ask, I like to participate more, for example, to go seeing what they know for us to be guiding. (E6)

[...] who are the coordinators are the two nurses, [...] and we ask the help of the other professionals, and eventually the doctor, the dentist, the NASF staff, the support group, , the nutritionist or physical educator then we have this participation of these professionals. (E11)

The work developed in groups is a tool of great importance for professionals, since they enable the exchange of knowledge among the people themselves and helps the professional in the search for guidelines on the frailties presented. It is an effective way to enable the person to master his or her own care because, once she interacts with the group to contribute to building other people's knowledge, she becomes more confident in empowering herself and becomes reference to the others.

On the other hand, the individual consultations happen every one or three months with the nurse and the management of the consultation, in the majority of the cases, it is given by the physical examination, and anamnesis questions about feeding, physical exercise, use of medications, past days and if there was any intercurrent.

I approach everything, nutrition, physical exercise, I make an analysis of the blood glucose markings they bring to me, and then I do the basic physical examination. (E17)

[...] every six months they are passed through a medical evaluation, right, and Nursing. If you do not come with the doctor, come with the nurse. The right would be to pass before, but, the unbalanced step up before, even every three months, two by two. (E1)

There are nurses who only do group care, but, if the person manifests the need for an individual consultation, they can schedule it.

The individual consultation does not, I have not done to, to the patient himself, but if he shows interest or finds I need, without any problem. (E2)

When asked if they use some criteria to perform the foot exam and how often, some say that they try to perform the test in all

consultations, others that perform once a year and others that do not.

No, there is not a diabetic sitting there that I will evaluate your foot, unless the person has a wound there, then you will keep an eye on that foot, follow it, guide it as it is taking care of, if you do not have an injury, hurt is something that really happens. (E4)

The correct would be to evaluate every time, but, not every consultation, but good here has not had so much, I have not had it yet, because I did not have so much contact with patients, with diabetes like this, but it would be all right to make an assessment and guide to do this accompaniment at home, but not every time I do not. You should. (E7)

[...] this is something I sin because sometimes I do not look at his feet, normally I do not do it, usually we stick to other things, food, physical activity, prescription and routinely I do not have the habit of looking at patients' feet, so it becomes difficult for me to respond. It is only if the patients complain, usually they already come with a wound, then we will evaluate. (E9)

It has been detected that there are important gaps in nurses' knowledge about how to perform diabetic foot examination. The most commonly used criterion, for nurses to evaluate the person with diabetes is the patient's complaint.

The prevention of diabetic foot is due to foot exams, which are performed by the doctor or nurse in primary care, whose importance is fundamental to reduce complications. There is evidence of the importance that all patients with diabetes should be screened to identify those at greatest risk of developing foot ulcerations, and may benefit from prophylactic interventions, with self-care being one of them.²⁴

In Canada, Primary Care interventions follow a similar pattern. According to the Canadian Diabetes Association Guidelines (2013), people with diabetes or at risk of foot ulcers receive regular review of a foot protection team, according to legal guidance, which requires urgent medical attention, are referred to and treated by a multidisciplinary foot care team within 24 hours. The multidisciplinary discipline requires doctors in different specialties, a nurse specialist in diabetes, and a podiatrist.²⁶

To carry out the examination of the feet, the person must remove the shoes and socks and the professional must carry out a cautious evaluation of the feet in a well-lit environment. The professional should also assess whether the shoes are appropriate, fit

and comfortable at the person's feet. Afterwards, the characteristics of the skin should be evaluated, including hygiene observation, nail clippings, nail infections or between the fingers and presence or absence of ulcerations or areas of erythema. In the musculoskeletal evaluation, the professional evaluates the presence of deformities, where the most common have areas of increased plantar pressure, ruptures of the skin and / or hyperextension of the metatarsophalangeal joint, with flexion of the interphalangeal (claw toe). There is also vascular evaluation, where the tibial and posterior pulses are palpated and recorded as absent or present. The neurological evaluation aims to evaluate the loss of protective sensitivity through tests previously described.²⁴

It is recommended that every person with DM perform the foot exam at least once a year. The professional must take into account some important aspects that characterize the risk factors for diabetic foot development, such as previous amputations, history of foot ulceration, peripheral neuropathy, foot deformity, peripheral vascular disease, peripheral nephropathy, poor glycemic control and smoking.^{24,28}

In this way, it can be concluded that foot examination is often neglected by primary care professionals, since they only examine it if the patient presents a complaint.

The question of what is important for the person with diabetic foot to know and do about feet, the definitions that have appeared the most are about proper nail cutting, the use of proper shoes, the importance of foot hygiene, not to leave them wet, among others.

I think it is important to have this notion of the inspection, the cleaning of the foot drying correctly, the nail cut, ah the question of the temperature of the foot is a little invariable up, but I think it is more the matter of the shoe, sock because we encourage them to do physical activity and when they see so much or less of a slipper or of a more social or tight shoe, [...] foot inspection, drying, many used [...] enough moisturizer, well, we said no in the middle of the feet can cause coldness [...] (E11)

Health education on foot care is a well-established practice that is central to the prevention of complications. However, studies show that this practice is still poorly performed and that many patients are unaware that they already have the risk of imminent amputation. There is also a deficit of a pattern of guidelines that professionals should make or this pattern is deficient.^{6,29}

Given this, we can understand that the knowledge about the care that the patient should do and know is very limited among professionals, since the guidelines aim, for example, cutting nails, wearing shoes, inspecting feet, among others, while care should be broader because diabetes is a systemic disease that has to be worked out as a whole. One of the characteristics that prove the lack of knowledge, of most professionals, on the subject is that most of them assimilate the diabetic foot to the wounds.

When questioned about what knowledge she had about diabetic foot treatment, one of the interviewees was very succinct:

From the moment you have a wound, as soon as you start having this wound, that would be more. (E2)

The interviewees reported that when there is some intercurrentence they refer the patient to the family doctor. This in turn directs, depending on the situation, to the endocrinologist, nutritionist, social worker, among others. There are also cases in which the family physician, identifying that the patient needs guidance, refers to the family nurse.

Referred by the doctor, the doctor himself asks for the appointment of the Nursing [...]. I think in the first wound there I would worry and talk to the doctor, not to make the picture worse and of course always giving the guidelines, from hygiene to nail care. (E18)

In principle it is with the general practitioner here of the strategy, that he is going to be evaluating and suddenly if he needs to refer to a vascular for an endocrine or some other, it is the conduct of the clinician, I in principle more for the clinician himself, so much that we have already talked and we can not be referring to others. (E4)

In relation to the primary care professionals of each team, that perform the care of people with diabetic foot, according to the majority of nurses, all play a role in this care. Some also related the NASF to the calls.

I think the whole team ends up attending. (E9)

When you have a diabetic foot everyone is involved, because the person comes to the dressing and the technician attends the nurse calls the nurse evaluates, passes the appointment schedule to the doctor to see if it is bad or if not, to adjust the insulin so either have a whole stake. (E11)

These reports showed that, although there is no systematic attendance to people with diabetic foot in the FHT, the referrals are performed in a coherent way and with

interaction of all the team. However, the lack of a regional protocol makes it difficult to identify the risk factors, treatment and prevention for these people, not being a justification, because the subject is already well documented by the Ministry of Health, besides hurting the principle of the integrality of SUS.

CONCLUSION

Understanding the primary care nurses' behavior in the care of people with diabetic foot, it was evidenced, in this research, that the knowledge of the nurses, investigated on this theme is partial, superficial and fragmented, not allowing suitable behaviors for the care, especially in the detection of the risks for the development of the diabetic foot, and the accomplishment of the examination of the feet, Nursing care being the most referenced: glycemic control, foot inspection and general guidelines on hygiene care, proper footwear and nail trimming, in addition to the treatment of wounds.

Several reasons can be stated for this fact, among them, the formation of the Nursing professional, due to the weaknesses encountered during the graduation period; the lack of in-service training, due to the lack of continuing education for professionals, reflecting the nurses' performance in the service and interfering with the care provided to people with diabetic foot; and the current organization of the service, by high demand and, often, with a privileged focus on other attention groups.

The representation of the person with Diabetic Foot seeks a reflection on the importance of the professional's role as educator in their health disease process, as well as in promoting self-care in a singular and collective way.

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