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Knowledge of patients with Peripheral Obstructive Artery Disease: qualitative study

Conhecimento dos pacientes com Doença Arterial Obstrutiva Periférica: estudo qualitativo

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RESUMO | Estudo descritivo exploratório com abordagem qualitativa, que teve por objetivo identificar o conhecimento do paciente hospitalizado acerca da doença arterial obstrutiva periférica e suas necessidades de cuidado no domicílio. A coleta de dados ocorreu de outubro a novembro de 2016, através de entrevista semiestruturada com 13 pacientes internados para tratamento da doença arterial obstrutiva periférica em uma clínica cirúrgica de um Hospital Universitário do sul do Brasil. A análise dos dados foi realizada através da análise temática, onde emergiu as seguintes categorias: Hábitos de vida; O viver com Doença Arterial Obstrutiva Periférica; A compreensão do paciente enquanto portador da Doença Arterial Obstrutiva Periférica; As dificuldades enfrentadas no domicílio e A rede de apoio. Os dados apontam que os pacientes não têm hábitos de vida saudáveis e entendem a doença como algo passageiro e de início súbito, não estando, portanto conscientes dos fatores de risco e da sua condição crônica. Apresentam dificuldades em adquirir medicamentos e realizar os curativos na rede básica de saúde, adotando como rede de apoio os familiares. Conclui-se que os pacientes possuem pouco conhecimento acerca do seu diagnóstico o que contribui para o agravamento de sua condição de saúde.

PALAVRAS-CHAVE: Enfermagem. Educação em saúde. Doença arterial periférica. Alta hospitalar.

ABSTRACT | This is a descriptive-exploratory study with a qualitative approach aiming to identify the knowledge of the hospitalized patients about peripheral arterial occlusive disease and their needs for homecare. Data collection occurred from October to November 2016, through a semi-structured interview with 13 patients hospitalized for treatment of peripheral occlusive arterial disease in a surgical clinic of a university hospital in southern Brazil. Data analysis was performed through thematic analysis, from which the following categories emerged: Life habits; The understanding of the patient that lives with peripheral occlusive artery disease; The difficulties they face at home and The support network. Data show that patients do not have healthy lifestyles and that they understand the disease as temporary and that it onsets suddenly, therefore not being aware of risk factors and its chronic conditions. They present difficulties in acquiring medicine and performing bandage in the public health network, hence having their relatives as a support network. It is concluded that the patients have little knowledge of their diagnosis, which contributes to the worsening of their health condition.

KEYWORDS: Nursing. Health education. Peripheral arterial disease. Patient discharge

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Introduction

Peripheral Obstructive Arterial Disease (POAD) is the narrowing of the light from the arteries supplying blood to the lower limbs, causing a reduction in blood flow to the tissues. This pathology is characterized as multi-factorial and its main cause is atherosclerotic disease (Torres, et. al., 2012; Olin et. al., 2016). Although POAD directly affects the peripheral regions, such as the lower limbs, studies indicate that this disease is associated with different cardiovascular and cerebrovascular events, being considered a warning in the prevention of such events (Santos et al., 2013). According to the Ministry of Health (2011), cardiovascular diseases are responsible for more than 30% of deaths in Brazil, a fact that generates an important economic impact on the Unified Health System (Sistema Único de Saúde, SUS). According to Migowski, et al. (2009), the costs of the SUS for the treatment of such diseases in 2000 were 395 million reais and, in five years, these costs increased to 736 million reais. It is possible that factors such as the emergence of new technologies, the aging of the population, the increase in chronic diseases and even health care focused on acute diseases are related to the increase in the costs of treating these diseases.

In this context, it is possible to point out POAD as a problem of the contemporary Brazilian population, since its prevention consists in controlling chronic risk factors for its development and evolution. Several research studies indicate that the main risk factors for POAD are Systemic Arterial Hypertension (SAH), Diabetes Mellitus (DM), hyperlipidemia, obesity and smoking (Diniz; Pires, 2010; Lopes et al., 2012; Santos et al., 2013). Although in advanced stages, this disease can lead to mutilation and death, if diagnosed early it can be treated clinically with no need for surgical intervention.

For this, it is necessary that the patient is oriented about his problem, aiming to clarify him about the disease, its evolution and the proposed therapy (Reis, et al., 2012). It is seen that the chronicity of the disease, associated with non-adherence to the prescribed therapy causes the worsening of the patient's clinical condition, often leading to physical mutilations that negatively compromise their quality of life (Vaz et al., 2013).

This perspective leads us to reflect on the prevention of new complications as the main weapon in disease control, especially POAD, and self-care is an indispensable stage in this process. For this, it is essential that health education with the hospitalized patient is a reality within the tertiary health care sphere, because the lack of knowledge about the disease perpetuates the mistakes previously made, favors the low adherence to the proposed treatment and finally it leads to readmissions in worse health conditions (Teixeira, Rodrigues, Machado, 2012).

In this sense, the complex process of education can be understood as the meeting between different knowledge, which unites educational and health practices, with the knowledge inherent to the individual. Through this fusion of knowledge, the objective is a meaningful learning where the patient's knowledge represents the starting point, aiming to make them the main responsible for their health/disease process and to make them aware about what refers to the care needed for their health, promoting conscious and autonomous action (Marinho, Silva, 2015).

The health education process in the hospital has as one of its main objectives to prepare the patient for return to home, so as to make him the main responsible for his recovery and maintenance of his well-being. For this, it is necessary that the multi-professional team perceive hospital discharge as a delicate moment, in which there is a complex transition from professional to home care, and there is, at this moment, a fusion of feelings, such as: fear, anxiety, disappointment, contentment (Reis et al., 2013).

That said, counter-reference is an important stage of hospital discharge planning, because communication among the different levels of health care is indispensable, so that there is not only the exchange of information, but also its perpetuation. The role of the primary sphere with the patient after hospital discharge is essential in the case of chronic conditions such as POAD, since these diseases require continuous treatment and lifestyle changes (Caiafa et al., 2011).

Under these conditions, communication among the different levels of health care enables a better continuity of care regarding the patient's return to the community, also reflecting the patient's adherence to the proposed therapy during hospitalization (Serra; Rodrigues, 2010). Thus, it is configured as a patient support network that foresees the articulation of curative, preventive, individual or collective actions that meet the social needs in health. To prepare this patient to return home, it is necessary to identify how much he knows about his illness and treatment and the demands that affect the reorganization of his life habits to face the challenges facing the chronicity of the disease.

In this sense, the study has as its guiding question: What is the patient's knowledge about POAD and its treatment? Thus, considering that the need for patient preparation for hospital discharge is a relevant field of study, the objective is to identify hospitalized the patients' knowledge about peripheral obstructive arterial disease and its care needs at home.

Method

This is a qualitative, descriptive and exploratory study. In the qualitative approach, truth is considered as a set of realities and contemplates the complexity of the human being, using for this the holistic look in search of the perception of the whole (Polit and Beck, 2011).

The study was conducted at the Surgical Clinic Unit of a University Hospital in the south of the country, which is characterized as a medium-sized hospital with high complexity, being a reference for the entire state of Santa Catarina in vascular surgery. The Surgical Clinic Unit II is characterized as a mixed unit and, therefore, serves patients of both genders, undergoing clinical and/or preoperative and postoperative treatment of vascular surgery. The sector consists of 30 beds, with 12 beds intended for vascular surgery, four for plastic surgery, eight for proctology and six for urology (University Hospital, 2016).

The study participants were 13 patients hospitalized in clinical and/or conventional or endovascular surgical treatment for POAD diagnosis. The participants were selected through the census of patients that is printed daily at the unit, including patients older than eighteen; of both genders; diagnosed with POAD; and oriented in time and space. The exclusion criterion was defined as patients with POAD but hospitalized for the treatment of other comorbidity. Data was collected through interviews conducted from October to November 2016. The patients were invited to participate during the nurse's (researcher) daily visit. Thus, a specific date and place for the interview were determined, which was the shift room of the unit. An instrument composed of open and closed questions that goes through three distinct moments was elaborated: in Part I (five closed questions and three open questions) the following was asked: age, gender, marital status, living with a companion, having someone to help with care, education, work, profession, health problems and medication use; Part II (four open-ended questions) dealt with life habits (smoking, physical exercise, eating) and Part III (eight open-ended questions) focused on aspects related to Diagnosis and Treatment (past and current history, if there was an explanation about his illness from a health care professional and how the patient understands his problem, what care he has at home, investigating the presence of a person to help him and what is the help, what are the facilities and difficulties for perform the treatment at home).

The interview was recorded and performed according to a previous appointment with the patient. The mean duration of the interviews was 20 minutes, varying according to the way each participant expressed himself in the face of the questions. Data was analyzed in the light of thematic analysis, which consists of the execution of three important phases, defined as: pre-analysis; material exploration and treatment of results, inference and interpretation (Minayo, 2013).

In the pre-analysis phase, the interviews were transcribed allowing for a thorough reading and for

the organization of the material by similarity. During this phase, we sought to identify the patients' knowledge about POAD, their life habits, the difficulties encountered at home after hospital discharge and the necessary guidelines for the continuation of the proposed treatment after their return to the community. In the phase of material exploration and outcome treatment, the material obtained through the interviews was faithfully interpreted and divided into pre-categories. Finally, in the phase of outcome treatment and interpretation, the data were separated into thematic categories that were sustained and discussed according to the current literature.

Chart 1 displays the parts of the research instrument, the type of question and the categories it generated.

Chart 1. Demonstrative of the categories listed. Florianóplis, 2017

Part of the survey instrument/type of questions	Category that it served as rationale for
Part I (five closed questions and three open questions)	Life habits of the person with peripheral obstructive arterial disease
Part II (four open questions)	Knowledge about peripheral obstructive arterial disease
Part III (eight open questions)	The difficulties faced at home The support network

Source: Authors' archives, 2018.

The project was submitted to the Ethics Committee, as recommended by Resolution 466/12 of the National Health Council, on research involving human beings. Patient acceptance was obtained by signing the Free and Informed Consent Form (FICF). Anonymity was maintained using alphanumeric identification (P-Patients or AP-Patient Companion [from "Acompanhante do Paciente in Portuguese"], followed by a numerical order from 1 to 13).

Results

The nine study participants were admitted to the Surgical Clinic Unit at the time of the interview and were 46 to 78 years old;, one patient was 40-50 years old, two between 51and 60, six between 61 and 70 and four were between 71 and 80. Of the 13 interviewed patients, seven are female and six male. Regarding marital status, four were married at the time of the interview, two in a stable union, five widowed and two divorced. Of the respondents, 12 have children and only one does not, with 11 residing in the company of spouses, children or family members and only two residing alone. Regarding schooling, two had completed high school, three had completed elementary school and eight had incomplete elementary school. Thus, low schooling was predominant among the study participants, since seven of them did not complete elementary school. Regarding work activity, one patient reported being unemployed, one being a pensioner and two women defined themselves as housewives and, therefore, depended financially on their spouses. Seven of the participants are retired and two reported that they work; however, they are away from work due to sick leave for health treatment.

Through the ordering and reflection of the data, the following categories emerged: Life habits of the person with peripheral obstructive arterial disease; Living with peripheral obstructive arterial disease; Knowledge about peripheral obstructive arterial disease; The difficulties faced at home; and The support network.

Life habits of the person with peripheral obstructive arterial disease

In this category, reports were organized that address the life habits of patients diagnosed with POAD, including issues related to smoking, physical activity and eating habits. Regarding the smoking habit, two patients stated that they smoke, four never smoked and seven are former smokers. Regarding lifestyle habits, two unhealthy habits strongly related to POAD were present: smoking and physical inactivity.

I've already smoked a lot, but not now [...] I smoked two cigarette wallets a day (P2).

I smoked 20 cigarettes a day before I was hospitalized (P3).

I quit smoking 25 years ago. I smoked two to three wallets a day [...] today I am 68. I started smoking when I 16 years old (P13).

Regarding physical activity, nine participants recognized themselves as sedentary and reported not practicing any physical exercise; three reported walking frequently before becoming ill and one participant reported having played soccer once a week before hospitalization.

I don't [practice physical activity]. For over 30 years I played soccer about three times a week (P2).

I never practiced (P3). I walked a lot. Now is that I am not walking anymore (P13).

Regarding eating habits, the 13 participants demonstrate knowledge about the care they should keep with eating but, despite knowing the harms of some foods, they reported that they do not have any dietary restrictions. Financial issues were reported by the interviewed patients as an obstacle to adhering to the recommended diet.

So, I've already tried several times on a specific diet, but I've not reached the end (P13).

When I wanted to eat, I ate (P10).

I've tried a few times [on a controlled diet], but diabetes is too low and I get sick. So, I have tried several times on a specific diet, but I have not reached the end (P9).

She was drinking skimmed milk, but then it ends and you can't buy it and she ends up returning to the full (AP5).

Living with peripheral obstructive arterial disease

This category included reports that allude to the comorbidities associated with POAD development and evolution.

Questions related to comorbidities of hypertension and DM were addressed. The association of hypertension with DM was reported by 12 of the interviewees. They reported that they use medications daily, such as: antihypertensives, hypoglycemic agents, insulin or the association among these pharmacological therapies. One participant reported being diabetic and using, in addition to prescription drugs for the treatment of DM, drugs for heart disease, but could not tell if they were hypertensives.

I use every medicine the diabetic has to take, I use. Insulin, tablet, everything [...] I have [high] pressure, but I take pressure medicine, my pressure is 13, it's 12 (P10).

For diabetes I take regular insulin and take pills. I take two pills and when I have I take three, which is not to affect the heart. That kid medicine, the AAS (acetylsalicylic acid). For everything I take a medicine (P12).

Although the number of hypertensive and/or diabetic patients is high, many have reported that they often do not follow up on such comorbidities and limit themselves to the prescribed drug therapy, which is often outdated due to the evolution of the disease.

No, I don't monitor [blood pressure and DM at the Health Post]. I came back there on Friday, after a year, to see the pressure and the diabetes. And it was high, the pressure and diabetes (P6).

Under these conditions, it is important to highlight that hypertension and DM are among the most common risk factors for the onset and progression of POAD and, therefore, if not treated correctly, contribute to POAD evolution to clinically more severe cases.

Knowledge about peripheral obstructive arterial disease

Understanding POAD is the first step to achieve the success of the proposed treatment. Understanding the chronicity of the disease, the factors that led to illness and the alternatives to control the evolution of the disease represent essential elements for the promotion of health and maintenance of the patient's well-being. However, the low schooling of the studied population is a factor that hinders this process. This fact requires from health professionals a special dedication to make themselves understood. It was observed from the interviews that many patients hospitalized for POAD treatment are unaware of both their medical diagnosis and the reasons that led to their illness. Although some health professionals explained about POAD and its treatment, the information discussed was not clear or assimilated. When asked how they understood the POAD, the statements indicate:

From the knee down the veins are very thin, this is where there is no passage. This was what I understood (P1).

What they explained today is that it is infected. That the infection has already taken over the veins there and that's why they opted for the thigh amputation that will be done tomorrow. Because it is already well infected and the infection is already going into the blood (AP3).

No [they explained to me]. Such an explanation that I couldn't understand. They do not explain it that way. They say it's because of the cigarette (P7).

I understood that I have diabetes, that I have to take care of myself. They will start amputating, amputating until death (P12).

Although the patients reported that a health care professional had explained about their illness, the information was not adequately assimilated, and seven of the patients interviewed associated occasional events as the effect of involuntarily tapping an object as the main reason for their illness. Trauma may lead to acute POAD, but it is not the etiology of the disease (Lopes et al., 2012). In this regard, the interviewed patients who reported understanding the explanation of their disease defined their diagnosis as a circulation problem or lack of circulation in their legs. They also reported that diabetes was the main reason for their illness. Although diabetes, in fact, is one of the main risk factors for POAD, it is known that other elements were determinant in the disease process, such as smoking, physical inactivity, high blood pressure levels and hyperlipidemia (Reis et. al., 2012; Rolim, et. al., 2015).

In contrast to the need for guidance, it was observed in the patients' statements that the explanation of the health professionals regarding the medical diagnosis is unclear, most likely due to the use of technical terms or words unknown to patients with POAD.

They don't speak clearly, you know, they don't speak like this: Dona P1, you had this and that. No, they speak messy, so you understand what you want to understand (P1).

I still don't get it. A thousand things are going through my head that I might lose my leg, anything. Because I couldn't sit with a person who could explain to me more or less what it would be like (P7).

The difficulties faced at home

Hospital discharge is a critical moment of hospitalization and, in this transition, it is essential that the patient's knowledge regarding its diagnosis and control of risk factors are well established. Otherwise, POAD aggravation will become a reality over time. Thus, when asked about the care with POAD at home, nine patients reported that they have difficulty in self-care, with greater concern, especially with the change of dressing and access to prescription drugs. However, two patients reported no difficulties in continuing care after discharge due to family support at home.

It will be the dressing, I will see if I make a deal with the health center that is near my house to see if they do it during the week and on the weekend some family will do for me (P4).

My difficulty is the medication, of not having access, because if you go looking in the post usually does not have. Understood? Usually they do not have. Because before I came here I went to look for pain drugs and the pain drug they usually didn't have (P1).

There is an inherent awareness of the patient regarding self-care, as it demonstrates understanding of the need to modify some habits practiced in their daily lives. The need for a healthier diet within its economic possibilities, weight control, smoking cessation, correct use of medication and physical inactivity were commonly mentioned by the patients when asked about the health care that would be needed after hospital discharge.

I will have to change a lot in my diet; I will have to eat more fruits, more vegetables to regenerate the cells (P1).

I will have to change the diet, which is paramount, exercise and greater health care, due to my age, 70 years old (P4).

A significant number of the interviewed patients expressed the desire and intention to maintain a healthier diet when returning home; however, they simultaneously informed this desire that they have difficulty in purchasing the foods recommended for financial reasons. As for the patients who live alone, food preparation was also an obstacle, a fact that favors the consumption of inadequate food.

I live alone and I can't do anything, I can barely make rice. Greenery and diet stuff so I don't worry, when I go to the supermarket I don't worry about that. I want to see if I can get someone if they don't charge me too much. Then I'll get someone to make the special food (P2).

Some study participants exposed the difficulty of funding the recommended diet and drug treatment as an obstacle to the prescribed therapy. They report that in periods of disruption of the public health services, such as strikes, the drug therapy had to be suspended until the normalization of assistance by these agencies.

I've already spent 3 days without taking insulin. And I take 22 (units) of insulin in the morning and 22 at night. If I don't do it goes to 500, 600, as one time that I came here. Of course I just took a serum and came home, because there was no insulin, the posts were all on strike (P13).

They will prescribe me a type of drug here to do the treatment at home, then I arrive at the health care center and they don't have it. That is why you who work in health care are inside. So the major difficulties of the poor are just that! It is strike upon strike, when the health care center opens it has no drugs. When there is insulin, they don't have a needle and so on. There is one drug type and not the other (P12).

The support network

This category covers the support network that the patient uses for the continuity of his treatment at home, be it family members, community or public health services. The care provided by family members after hospital discharge, represented by the spouse, children and grandchildren, was the main support network among the respondents. Such care goes from assisting with hygiene cares, dressing, from domestic activities such as food and home cleaning to monitoring the health services.

My children help me with cleaning, dressing, and medication. They do a little bit of everything (P3).

My son. He makes lunch, does the laundry, he does everything. There are many drugs to take. So he put everything on the paper (P10).

Therefore, it is clear that the patients with POAD have some degree of dependence on performing their daily activities, such as: bathing, dressing, food preparation, and medication administration, among others. This is justified by the advanced age and by the physical limitation that the disease causes as it progresses.

The same was exposed by Rolim et al. (2015), who associated comorbidity grouping and population aging as factors that hinder the patient's recovery process. Thus, the presence of children, the participation of the spouse and other family members has been shown to be one of the main factors in the patient's recovery

process after hospital discharge. For those who have a good family structure find in this relationship support for the performance of daily activities.

> *I think I have no difficulty, because I have enough people to help me, there is my daughter, there is my grandson, there is my grandson's wife (P5).*

What is observed is that the primary health care system was poorly remembered by patients as support for the continuity of treatment, so that its use remained restricted to the supply of medicines and materials to perform dressings at home. Therefore, it is understood that the basic health network is underused, so that its potential is not being fully exploited.

> *Consultation [at the health post] I do not trust much. But I like the nurses. I'll get the tapes that have to go to those meetings. I'm not old enough to go home yet. My husband, they went (P10).*

> *Let's get the materials from the health post and the dressing is for my sister-in-law to do (P8).*

> *Yes, I use the little health post. I pick up the medicine every month (P12).*

Discussion

The aim of this study was to identify the knowledge of hospitalized patients about POAD and their home care needs. Therefore, knowing the patients' daily life, their past life history and their way of life were fundamental elements for this construction.

Knowing the level of schooling represented an indispensable stage and one of the major problems identified because, although we know that knowledge is inherent to all and that wisdom is a good acquired during the process of living, schooling expressed by the years of study of an individual denotes an important role in their lifestyle habits.

In line with other scientific findings, this study pointed to a low level of education with regard to the research participants and patients with POAD, with a mean schooling of less than nine years, which corresponds to incomplete primary education (Diniz; Pires, 2010; Reis et al., 2013).

Ratifying such issues, a study conducted with 54,369 individuals aged 18 years old or older in the Brazilian capitals and federal district, related low schooling with the habit of smoking (Brazil, 2015).

Berto, Carvalhaes, Moura (2010) observed that smoking is higher among individuals with low schooling, being inversely proportional to school time. That is, the longer the period of school activity, the lower the prevalence of this habit so strongly associated with various diseases such as cancer, cardiovascular, cerebrovascular and pulmonary diseases. This fact implies the adequacy of strategies to inform about the harmful effects of tobacco and about available cessation tools.

In this case, it can be inferred that the knowledge acquired through the school represents a protective factor regarding smoking. It was also seen that low schooling is directly related to an inadequate diet, sedentarism and, consequently, obesity.

A study to investigate the prevalence of PAD and its risk factors in the Brazilian population identified the following as risk factors for PAD in the investigated population: smoking, sedentarism, diabetes mellitus and age, which are similar to those of other epidemiological studies including different ethnic groups (Alvim et al., 2018).

In this regard, Bastos et al. (2012) concluded in a study conducted with 449 men aged 20 to 59 years old and living in Campinas-São Paulo that the shorter period or length of school activity is associated with unhealthy habits and, therefore, to higher alcohol consumption, sedentarism, inadequate diet and smoking.

Malta and Menrhy (2010) report that the lack of actions (such as physical activity) that could prevent diseases in the population and promote health in the individuals can be understood as a failure in the health sector management process. Therefore, prevention and health promotion measures should be encouraged in order to prevent the sick individual from entering the service networks. Therefore, the absence of the habit of exercising or physical inactivity represents a problem that is getting worse every day in contemporary society; it is intriguing that this healthy habit, of low or no cost, is so little explored. In addition to this reality, the research also identified elements of great complexity regarding the diagnosis, treatment and evolution of peripheral arterial disease.

A study conducted with 174 patients to describe the physical activity patterns of symptomatic POAD patients demonstrated that the physical activity pattern of Brazilian patients with intermittent claudication symptoms is characterized by the long time spent on sedentary behavior and the low involvement in physical activity, with only 3.4% of these patients meeting the current physical activity recommendations for the general population (Gerage et al., 2019).

The socioeconomic issue has emerged as an element for the prevalence of risk factors for POAD such as smoking, sedentarism and poor diet with low consumption of fruits and vegetables and high intake of fried foods and soft drinks (Markdisse et al. 2008; Sales et al., 2015; Alvin, 2018).

Regarding the risk factors for POAD development, the patients were unaware of them, especially the influence of hypertension and DM, as many reported that they do not monitor their blood pressure levels, consider their diabetes of low intensity and do not follow up such comorbidities in the basic health network. A study aimed at evaluating the adherence rates to antihypertensive drugs of hypertensive patients identified low adherence to the treatment and that most of the patients reported difficulties in identifying the prescribed drugs because they did not know the name of the drug they were taking continuously. Of the main reasons for non-adherence, forgetfulness was the main one, among others, such as drug costs, tolerance to drug regimen, non-alcohol use (Oliveira et. al, 2013).

Under these conditions, it is important to highlight that hypertension and DM are among the most common risk factors for POAD onset and progression and, therefore, if not treated correctly, contribute to the evolution of the disease to clinically more severe cases (Rolim et al., 2015).

Given this perspective, awareness among the study participants was identified, albeit elementary, of the need to acquire healthy lifestyle habits in order to control the disease. However, regarding the medical diagnosis, the patients showed little knowledge about their disease, highlighting a set of problems with deep roots within the hospital dynamics, in which the speed with which the procedures are performed, the agility of the professionals who work there, as well as the predominance of hard technologies, show up as the great rulers of the hospital. There is a need to emphasize the importance of therapeutic communication, empathy and health education in high complexity, in order to make the patient primarily responsible for their health and disease process, as well as to be able to decide and discuss about the proposed treatment. It is believed that patients' awareness of their risks contributes to better adherence to the proposed therapy (Brondani et al., 2010, Oliveira, et al., 2013).

There was similarity between this study and the result found by Diniz and Pires (2010), since both studies obtained a percentage higher than 60% for patients with POAD who were unaware of their diagnosis. Under these conditions, POAD was interpreted by this population as an acute disease with a sudden onset. Understanding the disease as sudden is related to its silent evolution, which conveys the false impression of an unexpected onset condition.

Thus, it is essential to consolidate the patient's knowledge about their diagnosis and, especially, the need to control the risk factors of the disease. Otherwise, POAD aggravation will become a reality over time. In doing so, the process of health education during hospital stay is a vital stage for a successful treatment; but this process must extend to the community, and knowledge must be continually renewed and adapt to the dynamics of living of each one.

The low schooling of the interviewed patients represented an element of great relevance regarding the understanding of their health and disease process, as well as the information discussed during hospitalization.

Given these considerations, some questions arise in light of the above: Would the low schooling level of the patient with POAD be the main factor for the little knowledge about their disease? What is the responsibility of the health professionals to address this issue? Is the health education process not being neglected by the health professionals? It is understood that the patient should be primarily responsible for their recovery and permanence of their well-being; however, for such statement to be true, it is essential that the decision-making power is with the protagonist of care. But, how to decide between smoking or quitting smoking? Between exercising or staying sedentary? Or what to eat? How to prepare food? The decision or choice power becomes unviable if the patient is unaware of the factors that contributed to his illness; there is a great possibility through this ignorance that bad habits of life are maintained.

Regarding the difficulties faced at home, the correct implementation of the dressing represents a point of great concern for patients after hospital discharge. In fact, the apprehension regarding wound healing is justified by the impact that the wound has on the life of each patient, since it is associated with several emotional components.

Trophic injury can be the cause of a social, marital, professional distancing, or even associated with such issues. The fact is that the emotional burden of having a wound or being subjected to amputations being of a higher or lower order, it requires a new look at oneself and needs professional support to cope with this new condition (Fonseca et al., 2012).

It is noteworthy that the monitoring of the trophic lesion by a health professional can be decisive in the treatment of the patient, since such wounds present a long healing process, which requires a daily evaluation regarding its evolution and characteristics.

It is understood that the dressing change represents a moment of great importance, as it is the ideal occasion to evaluate the elements that make up the healing process, such as: color, odor, exudation, size and perilesional skin. The evolution of the trophic lesion transcends the tissue restoration process and also denotes aspects such as the nutritional status, the clinical condition of the patient and the success of the proposed therapy. Therefore, inadequate follow-up or inexperienced look of the caregiver before the wound may worsen a health condition or delay the patient's recovery process (Fonseca et al., 2012).

The support network for patients with POAD presented itself as a differential after hospital discharge, as there are many questions, difficulties and uncertainties regarding the diagnosis of the disease. Thus, the support of family, friends, professionals and health care networks represents a fundamental element for coping with the disease (Tavares; Silva, 2013).

Family support emerged as a very important aspect and a differential regarding continuity of treatment after hospital discharge, and family support is a facilitating agent of this process (Brondani et al., 2010). These results reassert the importance of social relations as an individual in the world.

Fonseca et al. (2012) and Barros et al. (2012) state that the bonds of affection established between family members, caregivers and friends favor the patient's recovery process, stimulating their self-esteem and self-care. Thus, the patient feels welcomed and emotionally empowered to cope and adapt to their new condition.

The acquisition of prescription drugs during hospitalization emerged as a hindering factor in adherence to treatment of the disease, since not all prescription drugs are easily distributed by the SUS, according to respondents. On the other hand, when there is a strike in the public health sector, the drugs are no longer delivered, resulting in the suspension of the drug therapy.

The difficulty in understanding the guidelines of the health professionals, as well as the little clarification regarding their diagnosis and prognosis of the disease were present. Thus, Diniz, Pires (2010) highlights the importance of using clear language with this audience, since scientific terms or the use of highly complex linguistic elements make it difficult for patients to understand.

In this sense, health education is seen as a primordial stage in the work process of health professionals, since it has the purpose of guiding, clarifying, forwarding, transforming and leading the individual to previously unseen paths.

Education promotes changes in actions, values, beliefs, and in seeing the world of the individual (Santos et al., 2011). In this sense, the transition becomes possible from the glimpse of an inert world to the glimpse of a reality that changes, renews and recreates itself, that is, education is a way of forming individuals capable of changing not only their own reality, but also of the world (Freire, 2014).

Therefore, stimulating education is a feasible strategy within the health universe and in all its spheres of care, since it needs to be initiated and continually renewed, given the dynamics of living. However, health education actions are still challenging, especially in the complex hospital setting. Given this reality, the use of resources that optimize the health education process and stimulate the patient's preparation for hospital discharge represents a strategy in the pursuit of continuity of treatment.

In this regard, it can be said that hospital discharge is a delicate and anxious moment, with a transition from professional care to home care, performed by both patients and their families.

Aiming to better prepare the patient for discharge, Mendez et al. (2019) state that the use of mobile health care applications has the potential to improve outcomes among those living with chronic diseases through improved control of the risk factors, to stimulate the co-participation of the patient in their treatment and family participation, and to bring a stimulus to health care.

Amstrong et al. (2017) approach the use of health technology as a look beyond the cure or comfort of the disease, but as a way of integrating the individual with all aspects that are part of their living mode.. The authors point out that advancing the use of health education technologies, advancing the development of the use of mobile technologies and health communication has been considered an effective strategy to encourage patients to adopt healthy lifestyles, to provide guidance on the disease, in order to clarify still obscure points of their illnesses, to stimulate self-care, to strengthen the conditions of chronic disease, and to reduce the time and cost for the patient and the health care system.

Among the educational technologies used in health education, the booklet is understood as a facilitating instrument, since it makes it possible to present the contents in a playful and attractive way. According to Grippo and Fracolli (2008), the booklet promotes discussion among professionals, patients and family members, generating a critical reflection on their current reality, thereby strengthening the individual's self-confidence. Thus, the booklet is characterized as a valid and easily understandable health instrument, a fact that helps in adhering to the proposed treatment and, consequently, in the construction of thinking focused on a new way of living.

Conclusion

The results of this study point to the need for better planning for hospital discharge of patients with POAD, so that the process of health education goes through all the stages of hospitalization, having its beginning in patient reception and its end through counter-referral.

It was verified that the patients diagnosed with POAD have little knowledge about its diagnosis and about risk factors for the development and evolution of the disease. This fact contributes to the worsening of their health condition and may lead to mutilations and deaths in more severe cases.

It is identified that the process of health education has been an activity of little prestige among professionals in the field, as some patients reported being completely unaware of their diagnosis. Factors such as work overload may be related to this problem, since the hospital is configured with a highly complex and highly technological environment, which can hinder human relations and the interaction between patient and professional. However, health technology can and should be used to facilitate the process of health education and when well applied excellent results are achieved, especially regarding the preparation of patients for hospital discharge.

The fact is that, regardless of the path to be followed, it is necessary to reflect on how the process of health education has been carried out among the three spheres of health care, because it is understood that health promotion and maintenance of the well-being of the patient are directly related to the awareness of the phenomena that anticipate their illness, as well as the necessary measures to confront the disease.

Viewing the patients in their entirety and proposing a holistic and individualized therapy is a necessity within the health sector. Thus, it was observed that the patient's understanding of the chronicity of his diagnosis, the understanding of the risk factors for the onset of the disease, as well as the presence of an efficient social support network, are determinant elements in the success and adherence to prescribed therapy.

Author contributions

Lover LN participated in the analysis of the research data, interpretation of the results and writing of the scientific paper. Martins T, Salum NC and Locks

MOH participated in the conception, design, search and analysis research data, interpretation of results, writing of the scientific article. Girondi JBR and Sebold LF attended the interpretation of the results and writing of the scientific article.

Competing interests

No financial, legal or political competing interests with third parties (government, commercial, private foundation, etc.) were disclosed for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.).

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