

HABITS OF PATIENTS AND IMPORTANCE OF PHYSICAL EDUCATOR IN THE TREATMENT OF *DIABETES MELLITUS* TYPE II IN PALMAS, TOCANTINS, BRAZIL

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RESUMO

A *diabetes mellitus*, doença não transmissível, que pode acometer homens e mulheres, pode ser classificada como tipo I ou tipo II. Esta doença está na 4^o posição das que mais matam no Brasil, e por esta razão, envolve atenção, tanto do poder público, quanto dos portadores e familiares. Descrever o estilo de vida em relação à dieta, cuidados com os pés e medicação adequada, além dos pontos de vista dos pacientes com diabetes tipo II, sobre a importância da prática de exercícios físicos, coordenados e programados. Foi realizado um estudo utilizando Questionário de Atividades de Autocuidado com Diabetes (QAD) e um segundo questionário com questões relacionadas com a importância do exercício físico para pacientes com *diabetes mellitus* tipo II. Foram aplicados questionários em 20 pacientes com a doença (08 homens e 12 mulheres), residentes na cidade de Palmas, Tocantins, Brasil. Percebemos que, mesmo com as recomendações dos profissionais de saúde, a maioria dos pacientes com *diabetes mellitus* tipo 2 não se adaptou a verificação dos níveis de glicose no sangue, nutrição adequada e cuidados com os pés. Além disso, apesar dos entrevistados conhecerem a importância da realização de atividade física regular, percebemos que estes não sabem quanto dias semanais devem fazer exercícios físicos, a fim de controlar a doença. A maioria dos entrevistados adota apenas caminhada como a atividade escolhida, e não verificamos, se eles sabem quais os exercícios mais benéficos para controlar a doença.

Palavras-chave: *diabetes mellitus*, nível de glicemia, autocuidado, physical educator

ABSTRACT

Diabetes mellitus, a non-communicable disease that can affect men and women, can be classified as type I or type II. This disease is in the 4th position in numbers of deaths in Brazil, and therefore, involves attention, both from the government, as the patients and family. The aims of this study is describe the lifestyle in relation to diet, foot care and proper medication, and the point of view of patients with *diabetes mellitus* type II, on the importance of the practice of physical exercise, coordinated and programmed. We performed a study using Questionnaire of Self-Care Activities with Diabetes (QAD) and a second questionnaire with questions related to the importance of exercise for patients with *diabetes mellitus* type II. Questionnaires were applied in 20 patients with the disease (08 men and 12 women), living in the city of Palmas, Tocantins, Brazil. Result: We noticed that even with the recommendations of healthcare professionals, most patients with *diabetes mellitus* type 2 has not adapted verification of blood glucose, proper nutrition and foot care. Moreover, despite the interviewees know the importance of performing regular physical activity, we noticed that these do not know how much of weekly days in which they must get physical exercise in order to control the disease. Most interviewees

adopt just walk as the physical activity, and we have not verified from the answers of patients, if they know what the most beneficial exercises to control this disease.

Key words: *diabetes mellitus*, blood glucose level, elfcare, educador físico.

1 Introduction

People's lifestyles were changing over the years, which resulted in inappropriate consequences for population health. Then, there was the search in order to resolve epidemic factors, such as *diabetes mellitus*, which results in a heterogeneous metabolic disorder that block the action of insulin (OLIVEIRA and ZANETTI, 2011). *Diabetes mellitus* is a non-transmissible disease that can affect men and women. It can be classified as type I or type II. This disease is in the 4th position from which entails more deaths in Brazil, and therefore, involves attention, from both, the government, as the patients and family (BRASIL, 2006).

The patients with diabetes should have self-care, because the disease is associated with hypertension, obesity and sedentary lifestyle, and also there is a multifaceted pathophysiologic state, characterized by the appearance of lesions that occur as a result of neuropathy in 80-90% of cases, which results in amputation of limbs (PACE et al., 2002). Regarding the increased weight of the patient with *diabetes mellitus* type II, some researchers report that approximately 80-85% of these patients are obese and sedentary people (OLIVEIRA and ZANETTI, 2011).

Because of the conditions resulting from physical inactivity, which affect the welfare, it is necessary, monitoring of patients by healthcare professionals and governmental campaigns to promote self-care. Therefore, it is important body movement through physical exercise routinely, but adherence to physical activity programs is still low (POETA et al., 2013). We aim to describe the lifestyle of the patients with *Diabetes mellitus* type II in relation to diet, foot care and proper medication, and, the opinion of these patients on the importance of the practice of coordinated and programmed physical exercise, in the City of Palms, Tocantins, Brazil.

2 Material and Methods

In this cross/observational study, patients with type 2 diabetes mellitus were evaluated just once. In this sense, cross-sectional studies, also called sectional, have advantages in relation to speed, low cost, case identification and detection of risk groups in a descriptive/transversal mode (HULLEY et al., 2003). It uses a perspective of time, and examined data at a point in time, without follow-up period. It is appropriate to describe the situation or the relationship between the phenomena at a fixed point. Furthermore, it is possible to examine characteristics, attitudes, behaviors and intentions of a group of people, requesting to persons, answers to the questions, through interviews or questionnaires (POLIT et al., 2004).

The study population was composed of the users assisted in the Health Center Pedacinho do Céu. This study was performed in the period from 03 to 20 October 2012. The sample consisted of 20 adult persons, inhabitants of the city of Palmas. All persons (08 men and 12 women) had been diagnosed with type II *diabetes mellitus*. 30 years old users of both sexes were selected. To collect the information, we use the translated and adapted for Brazil "Questionnaire of Self-Care Activities with Diabetes" (QAD) (MICHELS et al., 2010) and another questionnaire related to knowledge of physical exercise as a regulator of the type II *diabetes mellitus*. We also request to the interviewees to signing the Term of Informed Consent Form (ICF) ensuring the authorization to implement the data collection. Data collection was performed at Emergency Services of Palmas, TO, Brazil.

3 Results

Regarding the QAD, we organized the responses on a table (Table 1) where we can see that there are still persons with *diabetes mellitus* in Palmas, TO, who have not adopt a healthy diet 5, free of fats 2 and sugar 6, have not practiced physical exercise 5 or perform analysis of blood sugar 7. Only 10 interviewees perform self-examination and foot care every day, and also, surprisingly, half 10 of the respondents answered that they do not take the recommended doses of insulin injections. On the other hand, most of the interviewees 15 say that they practice physical exercise 1-7 days a week. Regarding medication, we have found that only 11 of the interviewees take the recommended doses of medication every day of a week.

Table 1 - Answers from the patients with type II diabetes mellitus in Palmas, TO, Brazil, taking into account the weekly period (n = 20) (QAD).

Itens	Answers (number of patients)			
	Not	Yes		
		Frequency (week)		
		1-3 days	3-6 days	Everyday
Follow healthy diet	5	9	5	1
Follow nutritional orientation of professionals	2	9	8	1
Eat five or more portions of fruits or vegetables	1	10	7	2
Eat foods high in fat	2	2	14	2
Eat sugar	6	12	1	1
Performs physical activity (30 minutes)	5	9	5	1
Practicing specific physical exercise	5	11	3	1
Performs analysis of blood glucose	7	9	3	1
Analyzes blood glucose the number of times recommended by the expert	7	9	2	2
Examine feet	6	9	4	1
Examine shoes before put them	9	7	3	1
Dry toes after washing	2	2	6	10
Take the recommended remedies for diabetes	2	3	4	11
Take the recommended number of injections of insulin	10	2	0	8
Take the recommended number of diabetes pills	1	2	5	12

The second questionnaire (Table 2) was composed of nine closed-type questions and two open-type questions, where we found that the majority of respondents state that their life have changed after the discovery of the disease 20 and had difficulties to adapt to a new lifestyle 16 due to the treatment required by type II *diabetes mellitus* 17. The interviewees also declare that know the importance of physical exercise 20 in the control of *diabetes mellitus* 19, and that they were informed of the importance of physical exercise for healthcare professionals 18, however, most declares have not searched guidance from a professional of physical education 15 and also do not know which the best exercises to control of the disease 9 or what the intensity of the exercises should be performed 12.

Table 2 - Lifestyle of the patients with type II diabetes mellitus in Palmas, TO, Brazil.

Ask	Answers	
	Yes	Not
Have your life changed when you found to be diabetic?	20	00
Have you had difficulties?	16	04
Do you perform some kind of treatment?	17	03
Do you know that physical exercise can help in the control of diabetes?	19	01
Do you consider important the physical exercise?	20	00
Did any healthcare professional inform that you should practice exercise?	18	02
Did you search some physical educator to assist you?	05	15
Do you know what physical exercises are best to regulate the disease?	11	09
Do you know what intensity you can do exercise?	08	12

The other two questions were: (1) what do you do to control the disease? Among the responses, 12 patients reported that they only follow medical guidelines and make use of medication, another six follow a diet, and one patient reported that controls the disease with exercise and do not follow any type of recommendation. Among those who follow the medication and also a diet, seven patients reported physical exercise. The second open question was: do you practice physical exercise? What exercise do you practice? Why? Among the responses, six patients do not practice any type of exercise, and 14 stated that they walk. Among patients who perform physical exercise (walking), three reported some activity in the liquid medium, such as swimming and water aerobics, three reported riding bikes and two reported that they exercise in gyms.

4 Discussion

In the city of Palmas TO, Brazil, there was an increase in the number of patients diagnosed with *diabetes mellitus* in recent years (MATTOS et al., 2012). In this sense, our results may help the public authorities to take steps to raise awareness and improve the quality of life to patients with *diabetes mellitus*. Besides a Public Politics to raise awareness (PACE et al., 2002), observed that family and friends influence on disease control. The authors showed that people with *diabetes mellitus*, which had adequate support from friends and family, joined to better self-care behaviors.

In this sense, the search for healthcare professionals to guide educational practice and plan meals, schedules and diet is another important pillar in emotional, psychological and physical development of patients (TORRES et al., 2009). However, in our study, five patients with *diabetes mellitus*, declared that they adopt a healthy diet, two patients said they do not do free fats diet and six declared eat sugar, moreover, we have noted that among patients who have greater care with feeding at most two of them realize this diet every day of the week. This fact may be related to the change of tastes of foods, which are not part of household consumption and

there is a conflict between the desire to eat and the need to contain it, along the life of the person with diabetes (RODRIGUES et al., 2009).

The performance of physical activity is another non-regular behavior and must have directed attention (CIOLAC and GUIMARÃES, 2004). It is necessary also check the glycemic index because of treatment require nutritional therapy, daily medications, programmed exercise, self-monitoring of glycemia, body care, permanent education and behavioral modification (POETA et al., 2013). Among patients, we found that six patients have not practiced any type of exercise, and (LYRA et al., 2006) stated they walk. Among patients who perform physical exercise (walking), three reported that conduct activity in liquid medium, such as swimming and water aerobics, three reported riding bikes and two reported doing exercises in gyms, making it necessary a better awareness program to patients with *diabetes mellitus*.

Another issue investigated in this study was the foot care and footwear. This procedure of analysis of the feet is important due the appearance of sclerosis and injuries, so that treatment be started in order do not occur evasion of physical activity (POETA et al., 2013). In our study, only 10 interviewees declared performing self-examination and foot care every day.

About medication Rodrigues et al. (2009), describes that oral medications allow obtaining adequate metabolic control, however, only 12 of the interviewees in our study reported taking the recommended number of diabetes pills. Although there is no relationship between the onset of the disease with the use of tobacco, some prospective studies show an increased incidence of type II *diabetes mellitus* among smokers (LYRA et al., 2006), whereas in our study, we observed that only four interviewees reported being smokers and three reported being ex smokers.

The results from the questionnaire II show that although the majority of the interviewees know that physical exercise helps to control the disease, they answered that this information is not passed on by healthcare professionals. For education to be effective it is necessary that healthcare professionals encourage patients to seek psychosocial, epidemiological and pathophysiological disease support (RODRIGUES et al., 2009). Another interesting observation from the response of the interviewees is that most did not seek any professional of physical education, but they know the best exercises to regulate the disease, due the accessibility of information by the globalization of media. It is essential to emphasize that exercise are varied for the reason that each person adapts best with a specific training sequence, hence the need of physical educator. The body mass index (BMI) and waist-hip ratio (WHR) are features that should be investigated beyond the relationship of diabetes with hypertension (TORRES et al., 2009).

5 Conclusion

We noticed that even with the recommendations of healthcare professionals, persons suffering type II *diabetes mellitus* from Palmas, TO, Brazil, have not adapted to requirements related to verification of glycemia, nutrition and foot care. Moreover, despite the interviewees know the importance of regular physical activity, we noticed that these do not know how many days per week they should get physical exercise in order to control the disease. Most of interviewees identified only walking as physical activity, and we do not verified if they know the most beneficial exercises to combat the disease. Therefore, we recommend that multifunctional teams that do the care to the patient in the emergency units encourage patients to follow a proper diet, check blood glucose levels and take care of the feet, and, look for a physical educator in order to reduce the symptoms of the type II *diabetes mellitus*.

6 References

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