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Adherenceto treatment and life style of patients with hypertension

Adesão ao tratamento e hábitos de vida de hipertensos

Adhesión al tratamiento y hábitos de vida de hipertensos

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ABSTRACT

Objective: To analyze adherence to antihypertensive treatment and lifestyle of hypertensive patients. **Methods**: Cross-sectional study with hypertensive patients from the Family Health Strategy of Lacerdópolis, SC. We used interview and the Brief Medication Questionnaire. **Results:**Participated 72 patients, 68.1% women, mean age 68.4 years (± 12.1). Regarding adherence to treatment, 6.9% are adherents, 19.4% are likely to join, 70.8% are likely to be low adherents and 2.8% are low adherents. Those who used multiple doses were less adherent (p = 0.00), failed to list what they used (p=0.03), and omitted more (p=0.02). There are difficulties for reading, opening and remembering the medication every day, and 19.4% reported failure of days or doses.**Conclusion:** There are difficulties to list medication in use, read, open and remember to take the medication, especially in those over 60 years. Multi-dose prescription significantly interferes with adherence to treatment and correct use of medication.
Descriptors**:**Hypertension,Primary health care,Medicationadherence.

RESUMO

Objetivo: Analisar a adesão ao tratamento anti-hipertensivo e hábitos de vida de hipertensos. **Método:** Estudo transversal, realizado com hipertensos da Estratégia Saúde da Família de Lacerdópolis-SC. Utilizou-se entrevista e o BriefMedicationQuestionnaire. **Resultados**: Participaram 72 hipertensos, 68,1% mulheres, idade média 68,4 anos (±12,1). Quanto à adesão ao tratamento, 6,9% são aderentes, 19,4% tem provável adesão, 70,8% provável baixa adesão e 2,8% baixa adesão. Quem usa múltiplas doses é menos aderente (p=0,00), falhoumais em listar o que usa (p=0,03) e omitiumais (p=0,02). Houve dificuldades para ler o rótulo, abrir a medicação e lembrar de tomar todos os dias, e 19,4% relataram falha de dias ou doses. **Conclusão:**Houve dificuldade em listar a medicação em uso, ler, abrir e lembrar-se de tomar a medicação, especialmente naqueles acima de 60 anos. A prescrição de múltiplas doses interfere significativamente na adesão ao tratamento e no correto uso da medicação.
Descritores: Hipertensão,Atenção primária à saúde, Adesão à medicação.

RESUMEN

Objetivo: Analizar la adhesión al tratamiento antihipertensivo y hábitos de vida de hipertensos. **Métodos**: Estudio transversal, realizado con hipertensos de la Estrategia Salud de la Familia de Lacerdópolis, SC. Se utilizó una entrevista con el BriefMedicationQuestionnaire. **Resultados**: participaron 72 hipertensos, 68,1% mujeres, edad media 68,4 años (± 12,1). En cuanto a la adhesión al tratamiento, el 6,9%

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son adherentes, el 19,4% tiene probable adhesión, el 70,8% probable baja adhesión y el 2,8% baja adhesión. El que utiliza múltiples dosis es menos adherente (p = 0,00), fallaron más en listar lo que usan (p = 0,03) y omitieron más (p = 0,02). Hubo dificultades para leer la etiqueta, abrir la medicación y recordar tomar todos los días, y el 19,4% relató un fallo de días o dosis. **Conclusión**: hubo dificultad en enumerar la medicación en uso, leer, abrir y recordar la toma de la medicación, especialmente en aquellos de más de 60 años. La prescripción de múltiples dosis interfiere significativamente en la adhesión al tratamiento y en el correcto uso de la medicación.

Descriptores**:**Hipertensión,Atención Primaria de salud, Cumplimiento de la medicación.

INTRODUCTION

Noncommunicable Chronic Diseases (NCD) are cause of mortality and premature morbidity worldwide, and in Brazil account for approximately 70% of adult deaths.[1,2] Even considering a 20% drop in this rate in the last decade, which can be attributed to the expansion of Primary Care, improved care and smoking decline, is still a relevant health problem that generates high costs for the *Sistema Único de Saúde (SUS)* [Unified Health System] and serious consequences for the health and well-being of the adult population.[3]

Systemic Arterial Hypertension (SAH) is a complex NCD, has a high prevalence and low control rates, involving drug and non-drug treatment, continuous use of medication and change in lifestyle.[4,5] It is an important risk factor, being the most frequent cause of diseases of the circulatory system.[3,4] These diseases are closely linked to ineffective control of blood pressure levels, and blood pressure levels are directly influenced by the low adherence to the proposed treatment.[6]

The concept of adherence varies among authors, however, in general, it is understood as the use of medications or other prescribed procedures in at least 80% of their total, taking into account schedules, doses and time of treatment.[7] Non-adherence is a complex and multi-determinate phenomenon and is a challenge for primary care professionals, especially the Family Health Strategy (FHS) and the *Hiperdia* programs.[5]

The *Hiperdia* program from the Health Ministry was created in 2002 and has as one of its objectives to monitor and guide hypertensive and diabetic patients, aiming at the correct treatment and use of medications, as well as work on prevention and health promotion.[8] By knowing the treatment and difficulties faced by hypertensive patients for the correct use of medications, it is possible to design and implement intervention strategies that favor a greater degree of adherence to treatment and, consequently, better control of blood pressure levels.[9]

The study's goal is to analyze the patients' adherence to antihypertensive treatment and their lifestyle. The patients were participants of a *Hiperdia* group from *Santa Catarina* State (SC).

METHODS

It is a cross-sectional study that was carried out with hypertensive patients assisted by the Family Health Strategy from a municipality in the Midwest of *Santa Catarina* State. It was included people of both genders, who were at least 18 years old and who were undergoing drug treatment. For the data collection, we used a semi-structured interview and the Brief Medication Questionnaire (BMQ) to analyze adherence to treatment. The BMQ is divided into 3 domains, which identify barriers to adherence, considering regimen, beliefs, and recall in relation to drug treatment.

The research was approved by the Ethics and Research Committee from the *Universidade do Oeste de Santa Catarina*, under the Legal Opinion No. 1.087.282 and respected the ethical precepts contained in the Declaration of Helsinki (2008) and the Resolution from the National Health Council No. 466/2012.

The municipality has an adult population of 1,618 people, and approximately 400 hypertensive individuals, and counting with one Family Health Strategy. The study included 72 hypertensive patients, who were interviewed during FHS care and at home visits, together with the Community Health Agents.

Adhesion was calculated according to the independent variables, using the SPSS 21.0 program and with a significance level of 95%.

RESULTS AND DISCUSSION

Considering the 72 participants, 68.1% were female, average age was 68.4 years old, (±12.1), 84.7% were white skin color, 77.8% were married, and the sample was similar to that found in other studies the same purpose.[2,6,9,10-1] **Table 1** shows the socio-demographic variables according to the treatment adherence. The majority (84.7%) considered themselves physically active, 91.7% reported having healthy eating habits, 19.4% regularly drink, 1.4% smoked. Among those who said to be physically active, when asked about the actual practice of physical exercise, 28 (38.9%) did eventually, 22 (30, 6%) did not practice it. The duration of the activity varies, 44 (61.6%) of 15-30 min, 6 (8.3%) from 30 min to 1 hour, and over 1 hour only 1 participant (1.4%). The results of several researches show that physical activity increases longevity and protects against the development of major NCDs. Furthermore, adequate levels of physical activity help in the rehabilitation of patients with cardiovascular diseases and other chronic diseases.[12]

The average time of diagnosis of systemic arterial hypertension was 11.5 years, with a maximum of 40 years of diagnosis. The mean abdominal circumference was 100.8 cm (±12.5) and systolic blood pressure at the time of the interview was 127.5 mmHg (±15.5). The mean abdominal circumference indicates a borderline situation for men and above the desired for women, being ideal for men below 102 cm and for women 88 cm.[4] This aspect was also evidenced in a study performed with hypertensive people in *São Paulo* city.[6]

Table 1 - Distribution of socio-demographic and health variables of hypertensive patients assisted by the Family Health Strategy (FHS) according to treatment adherence. *Lacerdópolis, SC*, Brazil, 2016.

Variable	Total	Adherents	Non-adherents	p
	n (%)	n (%)	n (%)	
Sex				
Male	23 (32)	04 (17)	19 (83)	0.25
Female	49 (68)	15 (31)	34 (69)	
Age group				
>61 years old	56 (78)	13 (23)	43 (77)	0.33
< 60 years old	16 (22)	06 (37.5)	10 (62.5)	
Marital status				
Married	56 (78)	17 (30)	39 (70)	0.22
Single	04 (5.5)	01(25)	03 (75)	
Other	12 (16.6)	01(08)	11 (92)	
Physically active				
Yes	61 (85)	16 (26)	45 (74)	0.60
No	11 (15)	03 (27)	08 (73)	
Healthy eating habits				
Yes	66 (92)	18 (27)	48 (73)	0.49
No	06 (08)	01 (17)	05 (83)	
Drink alcoholic beverage				
Yes	14 (19.5)	04 (28.5)	10 (71.5)	0.53
No	58 (80.5)	15 (26)	43 (74)	
Smoking				
Yes	01 (1)	0	01(100)	0.73
No	71 (99)	19 (27)	52 (73)	
Multiple doses of medicine				
Yes	52 (72)	06 (11.5)	46 (88.5)	0,00
No	20 (28)	13 (65)	07 (35)	
Omitted medications				
Yes	41 (57)	06 (15)	35 (85)	0,01
No	31 (43)	13 (42)	18 (58)	

Regarding the antihypertensive medication handling (**Table 2**), most people have no difficulty opening the package, but 11 people find it very difficult to read what is written on the package, and five find it very difficult to remember to take all medicines. People over 60 years old reported more difficulty opening the package, reading and remembering. Observing the events of forgetfulness, 12 respondents (16.7%) forgot to take their medication on some day of the week. Of those who forgot, 9 (75%) forgot once, 3 (25%) forgot twice in the past seven days. In the elderly population, the greater number of morbidities leads to high drug consumption, which contributes to decrease adherence to treatment and makes it difficult to remember all medications under use,[13] and in this study, most people (72.2%) receive a regimen of multiple doses of medications (2 or more times/day).

Table 2 - Problems reported by hypertensive patients with regards to medication handling. *Lacerdópolis, SC*, Brazil, 2016.

How difficult is it?	Very hard	A little hard	Not much hard
	n (%)	n (%)	n (%)
Open/close the package	5 (6.9%)	4 (5.6%)	63 (87.5%)
Reading what is written on the package	11 (15.3%)	18 (25%)	43 (59.7%)
Remembering to take all the medicine	5 (6.9%)	12 (16.7%)	55 (76.4%)
Getting the medication	1 (1.4)	9 (12.5%)	62 (86.1%)
Taking several tablets at the same time	2 (2.8%)	6 (8.3%)	64 (88.9%)

Concerning the treatment adherence, 6.9% were adherents, 19.4% were likely to accept, 70.8% were likely to be low adherents and 2.8% were low adherents. By considering only adherents and non-adherents, 73.6% can be considered non-adherent to treatment. Those with multiple dose regimens are less adherent to treatment (p=0.00). There was no difference in adherence between the genders (p=0.25). Interviewees over 60 years old have failed to report the medications in use more than the others. Moreover, those over 60 years old omitted more doses of medications in their reports. People who used multiple doses were less adherent (p=0.00), failed to list what they used (p=0.03), and omitted more (p=0.02), with men failing more than the women (p=0.02).

Treatment adherence is one of the major challenges in the treatment of hypertension.[14] A study carried out in *Paraná* State found adherence of 59% of hypertensive people, where we have observed that people use multiple doses were less adherent, results also described in other studies.[7,9,11-3-5] The choice of drugs with lower daily doses may be an alternative to improve adherence.[15]

Play strategies are an option to strengthen the patient's autonomy to facilitate the use of medication, especially with the elderly or illiterate population,[16] but some techniques aim only at the use of the medication, not the understanding of what is being used, and thus do not necessarily favor the adhesion because the patient does not care what he or she is using, it does not record the name of the medication, and this is not necessarily reflected in increased adherence to treatment.

In the FHS where this study was given, the model of the bag is used, in which the patient receives the medication in the correct dose for 30 days, separated between remedies to be taken in the morning and at night by drawing (sun/moon). Even so, almost all (84.7%) failed to list medications in use, 19.4% reported a failure of days or doses of medication, 56.9% reduced or omitted doses of any medication, 8.3% took some extra dose or more than prescribed medication (**Table 3**). Health professionals play a key role in improving adherence to treatment, with user-professional interaction determining the pharmacological adherence,[17] and the performance of the multi-professional team, especially nurses, has been shown to be an efficient strategy to improve adherence to treatment.[18]

When questioned about the functioning of the medication, 68 (94.4%) responded that it works well and 4 (5.6%) responded that it works on a regular basis. When asked how much of this medication causes a problem, 6 respondents (8.3%) reported problems and 66 (91.7%) did not. Hypertensive patients are often asymptomatic, which contributes to treatment non-adherence. Early detection of hypertension, and the inclusion of these patients in the *Hiperdia* programs, mean that "healthy" people will need periodic consultations, tests, and guidelines, which will only be followed if the patient is aware of the importance of adequate blood pressure control and medication, since many hypertensive patients, when they do not have complications and maintain stable pressure, sometimes abandon treatment or fail to take medication correctly, not realizing that they are only correct use of medication.[18]

Table 3 - Problems referred towards the treatment regimen according to the Treatment Compliance Questionnaire (BMQ). ***Lacerdópolis, SC***, Brazil, 2016.

Variable	YES n (%)	NO n (%)
Did you fail to list (spontaneously) the drugs prescribed in the initial report?	61 (84.7%)	11 (15.3%)
Did you stop the therapy because of the delay in dispensing the medication or another reason?	-	72 (100%)
Did you report any missed either days or doses?	14 (19.4%)	58 (80.6%)
Did you either reduce or overlook doses of any medication?	41 (56.9%)	31 (43.1%)
Did you take any either extra dose or medication more than prescribed?	6 (8.3%)	66 (91.7%)

With regards to the interviewees' diet, of the 66 people who reported having a healthy diet, 38 (52.8%) consume fruits and vegetables every day of the week, 23 (31.9%) do it 3 to 5 times a week and the remainder being occasional, and poor consumption of fruits and vegetables is related to an increase in blood pressure levels.[19] Sixty-one people (84.7%) reported controlling salt intake at meals. The low sodium diet must be followed and continually oriented to hypertensive patients, because the relationship between salt consumption is directly related to blood pressure levels.[19] Life habits are a fundamental part of hypertensive treatment, and are food care, weight control, reducing salt in the diet, not smoking, not drinking excessive alcohol, reducing stress and exercising.[20]

Among the participants, 44 (61.1%) reported having had some complications associated with SAH, of which 47.2% had high blood pressure, 16.6% had heart problems, 4.2% presented renal complications, 1.4 % cerebral and 18% other complications. Of the group of patients classified as adherent and likely to be adherent, 24.4% presented complications. Already identified as likely low adherence and low adherence, 73.6% had complications. SAH is considered to be one of the main risk factors for the development of renal complications and heart and cerebrovascular diseases, which increases the morbidity and mortality of the disease, and generates high medical and socioeconomic costs resulting, especially from complications linked to the disease.[4,20]

FINAL CONSIDERATIONS

Herein, it was found the predominance of women over 60 years old who used multiple doses of antihypertensive drugs. Adherence to treatment was low, especially in those using multiple doses. People over 60 years old had more difficulty reading the labels, opening and remembering to take the medication, and the fewer adherent participants were the ones who reported more complications associated with SAH.

These results show the importance of permanent and continuous education with hypertensive patients, making them more active and committed to treatment. Several strategies are available to go against low adherence, especially those that provide information to the patient. Professionals who work in primary care need to know patients, identify adherents and those who do not adhere to treatment, listing the reasons that lead to non-adherence, so that they can develop continuing education actions to assist hypertension in understanding and knowledge about the treatment, favoring a participative attitude and focused on the life quality.

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