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# Hypertension in the elderly: an approach to medication adherence

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**Abstract:** Systemic arterial hypertension is a chronic disease of high prevalence in Brazil, considered a public health problem. The purpose of this study was to analyze medication adherence by the elderly, for this, a quantitative study was carried out with hypertensive patients enrolled in the Hiperdia program and attended in a Basic Health Unit at Sinop, Mato Grosso. Individual interviews were conducted with the elderly in the Family Health Strategy, at prescheduled time and place according to the patient's availability. The interview script was structured with simple, direct and easy-to-understand questions, involving three aspects: socio-demographic variables (gender, age and income), guided questions about the pathology in question (eating habits, physical exercises, drug therapy) and assessment of adherence to antihypertensive treatment. The data were analyzed by means of descriptive statistics and the prevalence coefficients were calculated. Fifteen elderly (50%) adherents to the drug treatment were identified, of whom 13 were female and only two were male, thus making evident that women seek more the public health service and adhere better to the treatment. Given this, it is necessary to seek strategies that allow greater adherence to treatment and that encourage the male gender to seek health services for constant monitoring and not only in extreme cases.

**Keywords:** Public health, hypertensive, therapeutic.

## Introduction

Arterial hypertension (AH), a multifactorial clinical condition characterized by sustained elevation of blood pressure levels  $\geq 140$  and/or 90 mm Hg, is an important risk factor for cardiac and cerebrovascular complications and it is considered a public health problem around the world (WHO, 2011; SBC, 2016). The estimated number of adults with elevated blood pressure increased from 594 million in 1975 to 1.13 billion in 2015 (597 million men and 529 million women), likely as a result of population growth and aging (NCD-RisC, 2017).

In Brazil, the disease affects 25% of the adult population and by 2025 this number is projected to be 60% higher, reaching a prevalence of 40%. In addition to being a major cause of deaths from circulatory system diseases, hypertension brings a high socioeconomic burden, due to economically active people being transformed into temporarily or permanently disabled (Moreira et al., 2013).

The prevalence of hypertension in the elderly is greater than 60%; the correct diagnosis and the

persistence of patients in follow-up are key factors in achieving the ideal treatment target and reducing cardiovascular morbidity and mortality (Bastos-Barbosa et al., 2012). Medication adherence is defined by the World Health Organization as "the degree to which the person's behavior corresponds with the agreed recommendations from a health care provider", including changes in medications and/or lifestyle, is a significant factor in the success of treatment (Pescatello et al., 2004, Dobbels et al., 2005).

An observed fact is that the disappearance of symptoms early in the treatment motivates the elderly to abandon it because they do not understand that it is a chronic disease, which needs constant monitoring. This leads to the search for emergency services due to the increase in blood pressure, which can cause death to the affected person (Moraes & Tamaki, 2007).

In view of the above, this study aimed to evaluate the treatment adherence of systemic arterial hypertension by the elderly attended in the Basic

Health Unit (BHU) of Parque das Araras, in Sinop, Mato Grosso.

**Methods**

The present study was performed in 2014, in the municipality of Sinop, located in the North region of the Mato Grosso State. Elderly patients with hypertension enrolled in Hiperdia Program, treated in the Basic Health Unit of Parque das Araras were the subjects of this study. The Hiperdia Program was developed by the Ministry of Health for the enrollment, follow-up and assessment of hypertensive patients, generating quantitative reports according to the patients' age range, gender, medications used, and follow-up of blood pressure.

Individual interviews were conducted with the elderly in the Family Health Strategy (FHS) at pre-scheduled time and place according to the patient's availability. The interview script was structured with simple, direct and easy-to-understand questions, involving three aspects: socio-demographic variables (gender, age and income), guided questions about the pathology in question (eating habits, therapy) and evaluation of adherence to antihypertensive treatment.

To evaluate adherence, Portuguese versions of the Morisky-Green test were used (Morisky et al., 1986). The test was assessed according to the following classification: high adherence level, for patients who answered all questions negatively; low adherence level, when at least one answer was affirmative. In addition, it was assessed whether the low-adherence behavior was intentional or non-intentional. Patients with both types of low-adherence behaviors could also be characterized (Sewitch et al., 2003).

*Ethical Principles*

This study was submitted to the Ethics Committee of Júlio Muller University Hospital - Federal University of Mato Grosso and was approved within the principles ethics and law.

**Results and discussion**

Taking into account the proposed objectives, the data were analyzed following the steps established in the methodological course.

*Socioeconomic profile*

Thirty elderly people attended at the Basic Health Unit of Parque das Araras participated in the research. Of this group, 70% were female and 30% male, which corroborates with a study conducted by Borba & Muniz (2011) in the city of Pelotas-RS, which indicated that 70.4% of hypertensive elderly to look for the health service are female. Due to biological differences and attitude towards the disease, women spontaneously seek the service, thus showing that

they have more access to health care than men. Data from a study performed by Dourado et al. (2011) in Paraíba also corroborate with these results.

In relation to the marital status, it is verified that 20% of the elderly are single, 50% married and 30% widowed. Contiero et al. (2009), in a study carried out in the city of Presidente Venceslau-SP, found similar results when verifying that the majority of the elderly attended were married or widowed. From the quantitative high of married women, it was clear that having a partner influences demand and is an agent that facilitates treatment. For Dupre et al. (2009), marital instability reduces income, causes stress, interferes with emotional well-being, and lifestyle, precipitating chronic diseases and mortality. Long marriages encourage healthy behaviors, reduce the risk of chronic diseases, and promote increased survival, particularly among men.

Family income data can be observed in Table 1. When it was found that 83.4% of the elderly interviewed had a monthly income of a minimum wage and that 50% of them did not adhere to the drug treatment, making clear that socioeconomic factors can influence the adherence of the hypertensive patient. Daniel & Veiga (2013) affirm that the economic factor directly influences the adherence to the drug treatment, since many patients affirm the necessity of financial aid for the acquisition of the drugs, which can, consequently, compromise adherence to the treatment.

**Table 1:** Frequency of the sample characteristics in relation to socioeconomic profile and body mass index, Sinop-MT, 2014.

Variables	N	%	
Income	1 minimum wage	25	83
	2 minimum wages	04	14
	≥3 minimum wages	01	03
Marital status	Single	06	20
	Married	15	50
	widower	09	30
Body Mass Index	Normal	05	17
	Overweight	13	43
	Obese Class I	06	20
	Obese Class II	05	17
	Obese Class III	01	03

The BMI is a simple index calculated from a person's weight and height. The BMI provides a reliable indicator of underweight, overweight and obesity for most adults and is used to screen for

weight categories that may lead to health problems. The results obtained in the research (Table 1) show that only 5% of the elderly interviewed had the ideal weight for their height, and that 43% were overweight. Although BMI is not the most accurate method to indicate body composition, Anjos (1992) suggested being the most employed because it is low cost and easy to use for rapid assessment. Martíres et al. (2013), in a study performed in the Northern region of Portugal, found that overweight and obesity appeared in 43.6% and 39.6% of elderly, respectively, with high values in both genders. Similar data were found in this study, in which 43% of hypertensive elderly were overweight and 20% have graded obesity I.

#### *Medication adherence*

When evaluating medication adherence, it was found that of the men interviewed (nine), seven did not adhere to the treatment, regarding the women, of the 21 interviewees, 13 adhered to the treatment. These results show that 50% of the elderly adhered to the drug treatment and that the female gender is predominant (43%). Only two men of nine followed the treatment continuously and without interruptions, which is an alarming result, requiring greater attention of the nursing team.

Of the patients studied, 40% forgot to take the medicines, saying that they were careless about the schedule or that they stopped taking because they already felt better. Bastos-Barbosa et al. (2012), in a study conducted in Ribeirão Preto-SP, found similar results when verifying that more than half of the elderly interviewed reported forgetting to take the drug and having adverse effects. Marin et al. (2016) report that the forgetfulness manifests itself as a release from responsibility, even if in consequence comes the guilt.

The concern with treatment adherence is old, in 1991 a study was carried out on the influence of the educational process on blood pressure control in which it was concluded that:

*Only one third of patients always take treatment, one third take it sometimes, and one third never take their prescribed medication. Such data can be attributed to the patient's fatigue of living a "sick" condition (CAR et al, 1991).*

Patients with hypertension should make considerable efforts to adhere to lifestyle modifications, follow recommendations, and regularly take prescribed medications. Estimates indicate that the degree of non-adherence worldwide to chronic disease treatments varies from 25 to 50% (Morgado et al., 2010).

Research performed by Barreto et al. (2014) reported that 42.6% of the individuals studied were

considered nonadherent to drug treatment and that, although only 17.7% had unsatisfactory knowledge about the disease, this was a factor associated with non-adherence to drug treatment. Likewise, Leão e Silva et al. (2013), in a study carried out in the city of Governador Valadares-MG, report the fact that hypertensive elderly patients who are nonadherent to treatment consider hypertension as an acute, symptomatic and linked to emotional states. Such a mistaken perception makes it necessary to immediately reassess the guidelines provided to hypertensive patients by the health team, and it is not enough to report that hypertension is a chronic and asymptomatic disease.

AH in the elderly is closely related to the large number of cardiovascular events and, consequently, to lower survival rates. A worse quality of life is fact in this population when not treated properly. Several studies have shown that treating AH, regardless of age, brings improvement in the life quality and survival, allowing more dignified aging. It is fact, therefore, whenever possible, it is necessary to use drugs that better respect the patient's metabolic profile, have pleiotropic action and reduce blood pressure more easily for the blood pressure goals established for each case. Adverse drug reactions are also a proven factor in this study for treatment adherence.

#### *Therapeutic adherence*

When evaluating the dietary habits of the patients interviewed, it was observed that the percentage of elderly people who maintained a diet was 53.3%, while the percentage of those who did not adopt any control was 46.7%. The DASH (Dietary Approaches to Stop Hypertension) diet containing a high amount of fruits, vegetables, whole grains and low-fat dairy products, was designed to provide high amounts of potassium, calcium and magnesium. Another consideration in DASH eating plan is high consumption of fish, chicken and lean meats to reduce saturated fatty acids and cholesterol intake. The adoption of this eating pattern reduces blood pressure (Martin et al., 2007).

At FHS Parque das Araras, where the study was conducted, it was found that the difference in the number of elderly people who followed the diet and those who did not follow was minimal. The ease of preparing ready-made foods contributes to the increased consumption of sodium and fat.

For Biazi (2008), the best way to prevent AH is through lifestyle modification. Although effective, it involves a greater commitment to the patient and the effective family participation with regard to the diet and the encouragement to adopt these measures. For this author, changing habits of life involves changes in the way of living and in the very idea of health that the individual possesses.

When evaluating the practice of physical exercises, it was verified that 63.3% of the interviewees did not practice exercises and 36.7% practiced only three times a week. According to Alvarez & Zanella (2009), the practice of physical exercise reduces the risk of coronary artery disease by improving cardiopulmonary capacity, myocardial articulation, cardiac metabolism and improvement of the mechanical properties of the heart, as well as acting on risk factors such as hypertension. The regular practice of physical activity can be beneficial both in the prevention and treatment of hypertension, reducing cardiovascular morbidity and mortality. Active individuals have a 30% lower risk of developing hypertension than sedentary (Fagard, 2005; SBC, 2016).

### Conclusion

Of interviewed elderly, only 50% adhered to the drug treatment, mostly women (43%). These results allow the elaboration of new strategies for the control of this pathology in the Health Units. Health education; knowledge of the attitudes, perceptions and practices of the hypertensive patient; encouragement of active participation in treatment; appropriate communication and interaction between patients and health professionals; work of the cognitive and psycho social aspects of the users and the search for the involvement of the family in the treatment of the patient with hypertension are tactics that may contribute to greater adherence to the drug treatment.

More studies can contribute to discovering the reason for treatment resistance, since untreated hypertension can lead to more serious pathologies, such as myocardial infarction and stroke.

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