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Hypertensive population without response to antihypertensive drug therapy

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Abstract. This study aimed to know the profile of the hypertensive population, using drug therapy, not responsive to antihypertensive treatment. We interviewed 37 people diagnosed with systemic arterial hypertension even when they were treated. Patient data were collected through a questionnaire to assess the profile of people who have high blood pressure, even using antihypertensive. The results showed that the most common causes were sedentary lifestyle (35.1%), alcohol use, smoking and forgetfulness of medication use (29.7%). When analyzing the questionnaire, the participants' low schooling was diagnosed, since 56.7% were literate, 41.5% had elementary education, and 51.3% received less than a minimum wage. In conclusion, this study suggests the main influencing factors for the non-control of systemic arterial pressure, allowing to elaborate better strategies to combat systemic arterial hypertension
Keywords: Blood pressure; Hypertension; Hypertension Control

Introdução

The World Health Organization describes Systemic Arterial Hypertension (SAH) as one of the main responsible for cases of myocardial infarction, loss of renal function and stroke (NURSING, 2017).

The diagnosis of hypertension occurs when the arithmetic mean of three measurements is ≥140/90 mmHg. Measurements should occur on different days with a minimum interval of one week between them. (BRASIL 2014).

SAH is considered a risk factor for cardiovascular diseases and complications of cerebrovascular diseases (BRASIL, 2014).

It is estimated that 1/3 of the world population has SAH, and of these, only 1/3 presents controlled pressure. Thus, blood pressure control is fundamental in reducing disease-related morbidity and mortality (NURSING, 2017).

In Brazil, 32% of the population over 40 years of age have SAH, and approximately 15% do the treatment but do not keep it under control (BRASIL, 2014).

Malachias et al (2016) reported that factors of genetic origin (age, gender, family history), lifestyle (smoking, obesity, alcoholism, stress and high salt intake), physical and psychosocial environment , and accessibility to health services favor the emergence of SAH.

According to Ferreira, Barreto and Giatti, (2014) hypertensive patients should use antihypertensive drugs continuously, however, studies have pointed out that many hypertensive patients do not use the prescribed drugs.

The medication is essential for maintaining the patient's clinical condition. With the expansion of access to medications for hypertension and health services motivating changes in lifestyles, hypertension becomes treatable and avoids complications, allowing a normal life (MENGUE, et. al., 2016).

Weight control, avoiding diets high in sodium, in fats, as well as avoiding smoking and alcohol, are actions that contribute to the control of SAH, aiding in the responses to drug treatment (BRASIL, 2014)

Instructing hypertensive patients about educational activities to understand risk factors, ways of prevention and early detection of HBP complications allows adherence to therapies and control of hypertension (ALVES, et al. 2015).

Thus, this study aimed to know the profile of the hypertensive population, using drug therapy, not responsive to antihypertensive treatment.

Methods

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Thirty-seven hypertensive patients were included, who, despite being treated, remained with altered blood pressure values, with records that exceeded 140/90 mmHg in the last three moments of health promotion activities for hypertensive individuals developed by the Family Health Strategy team of one small municipality of Santa Catarina, in a period of nine months.

The arterial pressure of 140 / 90mmH was used as the basis for the diagnosis of hypertension, in accordance with basic care book number 37, published by the Ministry of Health, which deals with strategies for the care of the person with chronic disease - systemic arterial hypertension (BRASIL, 2014)

The 37 people were selected among those who have SAH. They were registered and accompanied by a team of ESF. This sample represented 5.8% of the total and 17.3% of those that were evaluated during the three health education meetings.

Of the 640 people with SAH, 396 had a record of participation in any of these three meetings, and 214 users of the last three quarterly health promotion meetings of hypertension were considered for evaluation. Of those, the persons who kept the records changed for the blood pressure values were classified for the study. The inclusion restricted those who presented essentially in the three encounters altered blood pressure.

The data were collected using a questionnaire and a script capable of diagnosing hypertensive patients even when being medicated. The questionnaire was composed by: a) closed questions (identification age, sex, weight, height, marital status, schooling, family income, habits and addictions, family history, type of treatment used for hypertension, forget to take the drugs); B) two descriptive questions: "Which situations do you forget to take medicine? What do you do when you realize that you forgot to take medication? "

The data received the quantitative treatment, which after being consolidated and categorized, are presented through graphs and tables, allowing analysis based on the bibliographic reference related to the presented theme.

Results and discussion

The age range by gender of the patients included in the study were expressed in Table 1. It was observed that women presented greater difficulty in controlling blood pressure than men.

More than 24% were less than 60 years old, of whom 88.8% were female.

The age group with the highest concentration of hypertensive patients with altered BP was over 70 years of age, despite having a significant representation between 61 to 70 years.

Table 2 shows the educational level of the patients. It is noteworthy that only 2.7% had high school and all were women. No man had completed high school.

Regarding education, 56.7% of respondents answered that they only know how to read and write. This fact should be considered when developing orientation activity on the control of hypertension, as it may influence the success of the therapy.

Table 1. Proportion of hypertensive patients according to age group and gender (N=37).

Age (years)	Male (%)	Female (%)
< 40	24,3	24,3
41 to 50	16,2	10,8
51 to 60	2,7	10,8
61 to 70	0,0	5,4
> 70	0,0	5,4
Total	43,3	56,7

Table 2. Classification of patients according to schooling, salary and marital status (N=37)

Variables	Male (%)	Female (%)
Schooling		
Read and write	24,3	32,4
Elementary	19,9	21,6
High School	0,0	2,7
Minimum Wage Number		
< 1	18,9	32,4
1 to 3	24,3	21,6
> 3	0,0	2,7
Marital Status		
Single	2,7	2,7
Married	27,2	27,2
Separated	2,7	18,9
Widower	5,4	0,0
Others	5,4	0,0

Women reported more schooling than men (24.3% vs. 19.9%). It is noteworthy that there were more women interviews than men..

According to Table 2, 51.3% earned up to a minimum wage, which suggests the relation with the low level of schooling, since 56.7% only knew how to read and write.

This information is relevant when analyzing the coping capacity of therapies for hypertension, since the focus of concerns are related to the basic minimum to survive.

The other interviewees earned between 1 and 3 minimum salaries (45.8%) and only 2.7%, receive higher salaries.

The marital status was shown in Table 2.

Table 3 shows the situations that influence SAH. It is noted that 75.8% reported using the prescribed antihypertensive medication correctly. At the same time, 29.7% stated that they often forget to take the medication.

The genetic factor related to hypertension was recorded in 56.8% of the responses, demonstrating the strong relationship between the disease and heredity.

Regarding the relationship between users' behaviors and hypertension, it was observed that: 29.7% smoked or smoked; 29,% are ethyl; 57.2% of women use or have used oral hormonal

contraceptives; 35.1% do not perform any physical activity.

Table 3. Classification of patients on situations that influence SAH

Variable	(%)
Uses or made use of alcohol	29,7
Smoke or have previously smoked	29,7
Uses or used contraceptives	57,2
Do some physical activity	35,1
Family history of HAS	56,8
Uses correctly prescribed medication	75,8
Uses other therapies besides medication	18,9
Forget about taking medicine	29,7

The characteristics related to anti-hypertension therapies were presented in table 4. Most (56.7%) used up to two types of antihypertensive drugs in an attempt to control their hypertension, followed by 29.7% who used three or four types of drugs, and 10.8% who used five or more types of drugs prescribed for the control of SAH.

A percentage of approximately 30% of the respondents answered that they forgot to take the medication, in situations like: "when I left home" or "just forget" or "when using alcohol."

About 23% forget to take their antihypertensive drugs when they leave home, and they take them when they return home. Most (30%) answered that even when they remember, they do not take the medicine anymore. The percentage of 23.1% answered that they take when they remember and a small percentage (7.7%) did not know how to respond.

Only a quarter of the users reported using alternatives to assist antihypertensive medication in controlling blood pressure. Of the outstanding alternatives taking teas accounted for 24.1% and taking juices 5.4% as complementary therapy to medication.

Table 4. Behavior of patients in relation to forgetting to take medication and use of other non-medicated therapies for SAH

Quantity of medicines in use				
	≤ 2	3 to 4	≥ 5	Don't Know / No answer
Male	18,9%	16,2%	5,4%	2,7%
Female	37,8%	13,5%	5,4%	0
Forget about taking medicine for pressure and in what situation				
	I leave home	Just forget	Alcohol use	Don't Know / No answer
Male	10,8%	2,7%	2,7%	0,0%
Female	5,4%	5,4%	0,0%	2,7%
What do you do when you forgot to take the medicine (n=13)				
	Take when come back	Do not take more	When I remember	Don't Know / No answer
Male	15,4%	23,0%	7,7%	0,0%
Female	7,7%	7,7%	15,4%	7,7%
Therapies you use in addition to the drug				
	Teas	Juices		
Male	8,1%	2,7%		
Female	16,2%	2,7%		

When performing a field survey for data collection by structured interview, there are limitations in its execution, such as: the respondents' tendencies in their answers, the distortions in the answers or the comprehension of the questions. However, our results were similar to those reported by Lessa (2001) and the Brazilian Society of Cardiology; Brazilian Society of Hypertension; Brazilian Society of Nephrology (2010), which highlighted the aggravating factors of hypertension and related sedentary lifestyle, alcohol and tobacco use, sociocultural and psychosocial issues with hypertension.

One highlight is the number of hypertensive patients who do not maintain control of blood pressure. The sample presented approximately 20% of the population evaluated with altered BP in three quarterly moments. This result was higher than the 15% reported by Brazil (2014). Nursing (2017) estimated in 1/3 of the hypertensive population living under high blood pressure.

According to Silva (2013) and Lima; Barros and Oliveira (2014), as the age increases, increases the chances of having SAH. This was presented in this study, since 48.6% were over 70 years of age. On the other hand, it is not simply about having the hypertensive disease, but that it does not have a control, despite being using antihypertensive medications.

The low schooling level of the interviewees was a determinant of the altered blood pressure. Larissa (2001) cited the relationship between schooling with the physical and psychosocial environment, and that directly influences SAH. This situation requires professionals with scientific technical knowledge necessary to control hypertension, as well as skills that allow the recognition of the real capacity of assimilation of the users on the recommended information.

Associated with low level of education, there is the financial capacity presented by the interviewees. Even the researched literature does

not directly mention the financial factor as a determinant of hypertensive diseases, we cannot fail to consider that administering the few resources they have can generate stressful situations, difficulties in acquiring drugs, better quality foods.

The antihypertensive treatment associated with changes in lifestyle are fundamental practices for controlling blood pressure (Ferreira et al., 2014). This study demonstrated that 75.8% use medications correctly and yet the blood pressure remains above 140x90 mmHg.

Only a quarter of users responded to some physical activity and less than 1/5 reported seeking complementary therapies. The fact is that, even with medications and use of alternative therapies, respondents are failing to keep blood pressure under control. In addition, Brazil (2014) and Oliveira et. al., (2013) reported that substantial changes in lifestyle need to be made for better quality of life.

The habits of smoking, of consuming alcohol, the sedentary lifestyle and the forgetfulness to take the medicine favor the blood pressure to be altered. Silva (2013) and Lima et al. (2014) confirmed that the user exposed to these factors normally develop hypertension. Thus, persisting in bad habits can aggravate the disease, to the point that you can no longer control it.

Another counterpoint to this study was that many hypertensives claimed to be using the drug correctly, even using more than one type of medication to control hypertension. Mengue et al. (2016) reported that drugs play an important role in controlling blood pressure, but changing lifestyle is directly proportional to the success of SAH control.

Conclusion

This study made it possible to characterize the people who use the drug therapy for SAH and remain with high BP. With this information, it becomes possible to carry out the planning of strategic actions, focusing on the presented reality.

The results identified factors such as sedentary lifestyle, alcohol and tobacco consumption, low schooling, low income, forgetting to take medication, not using complementary alternative therapies to control BP, and these seem to be directly related to the lack of control of the blood pressure.

Knowledge of these factors allows the development of action plans focused on the aggravating problems of SAH, and that users are not able to manage in their lives.

In view of the above, the following actions and lines of care in the prevention of hypertension can be taken:

a) Develop programs to promote and monitor health in order to motivate changes in attitudes, life habits, risk behaviors for hypertensive diseases;

b) Raising awareness about the correct use of antihypertensive medication;

c) To approach professionals of the users, allowing the knowledge of their potentialities and vulnerabilities and, thus, to find real strategies against the disease;

d) Mobilize and motivate health team to plan and execute actions against SAH.

e) To work the sociocultural, psychosocial changes related to SAH, in search of improvement and control of it.

f) Helping families and communities in behaviors that protect SAH users and those who already have HBV do not worsen it.

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