

THE IMPORTANCE OF FOOD AND NUTRITIONAL EDUCATION FOR HYPERTENSION CONTROL

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Abstract: **INTRODUCTION:** Systemic Arterial Hypertension (SAH) is a chronic pathology with high prevalence in Brazil and constitutes one of the main public health problems. This way, Food and Nutrition Education is part of an important line to promote healthy eating habits, being an indispensable tactic included in public policies in food and nutrition. **OBJECTIVES:** to identify the importance of food and nutrition education for the control of arterial hypertension. **METHODS:** a literature review was carried out in the LILACS, BVS and SciELO databases from 2008 to 2021, using the descriptors “Arterial Hypertension” and “Diet Hypertension”, with the Boolean operator AND between them. 47 articles were found, according to the inclusion criterion abstracts available in full, published in Portuguese, English or Spanish, carried out in human beings, which addressed themes related to hypertension, food and nutrition education. Studies in which the approach to the theme was not effective were obliterated, thus only 25 articles were selected for the review. **RESULTS AND DISCUSSION:** a study showed that among the nutritional factors that are associated with the high prevalence of SAH are the high consumption of alcohol, sodium and excess weight. Being associated with the consumption of potassium, calcium and magnesium, which would attenuate the progressive increase in blood pressure levels with age. Another analysis pointed out, as one of the results of the educational action, a growing and complex degree of learning, contributing to the construction of the participants’ knowledge, as well as stimulating social interaction as something important for the prevention of diseases. **FINAL CONSIDERATIONS:** in view of what was explained, it was possible to observe that therapeutic intervention and control of SAH requires changes in behavior aimed

at controlling hypertension and developing healthy habits.

Keywords: Diet; Nutrition Education; arterial hypertension.

INTRODUCTION

Arterial hypertension is considered a public health problem due to its magnitude, risk and difficulties in its control. It is also recognized as one of the most important risk factors for the development of stroke and myocardial infarction.(MACMAHON; PETO; CUTLER, 1996).The prevalence of arterial hypertension is high, estimating that around 15% to 20% of the adult Brazilian population can be labeled as hypertensive. Although it predominates in adulthood, its prevalence in children and adolescents is not negligible. (SBC, 1998).

Several population studies show the importance of controlling hypertension to reduce cardiovascular morbidity and Mortality. (YUSUF et al, 2001).In most cases, the cause of high blood pressure is unknown. However, there are several factors that may be associated with increased blood pressure, such as sedentary lifestyle, stress, smoking, aging, family history, race, gender, weight and dietary factors.

Despite the consolidation of the relationship between arterial hypertension and nutritional factors, their mechanisms of action on the increase in blood pressure are still not well understood. However, the effects of a healthy diet (rich in fruits and vegetables and low in fat) on the behavior of blood pressure levels are known. (SACKS et al, 2001).Among the nutritional factors studied and that are associated with the high prevalence of arterial hypertension are the high consumption of alcohol and sodium and overweight.(INTERSALT COOPERATIVE RESEARCH GROUP, 1988).

The adoption of healthier eating habits and lifestyles is strategic for achieving more

favorable results in the care of hypertension, being, in some cases, the only recommended therapy. The low adherence of patients to these non-drug guidelines constitutes an important difficulty in controlling the severity of the disease.(LIMA et al, 2009).

Hypertension control is one of the strategic areas of Primary Health Care (PHC). Educational strategies are an important instrument to encourage changes in lifestyle and reduce cardiovascular risk factors. Studies have analyzed the importance, effectiveness and limitations of these strategies in the treatment of SAH. As results, a reduction in blood pressure, a decrease in body weight and waist circumference, an improvement in the lipid profile and blood glucose, favorable changes in habitual food consumption and increased knowledge about the health-disease-care process have been observed. (MACHADO et al, 2015).

According to the WHO, the health education process is inherent to all practices developed within the Unified Health System (SUS). Because it is a transversal practice, it provides articulation between all levels of system management, being an important tool for individual and collective awareness of responsibility and rights to health. (BRAZIL, 2006).

If therapeutic intervention and control of these diseases is necessary, to encourage behavioral changes in relation to diet, medication intake and lifestyle, it soon becomes necessary to identify the importance of food and nutrition education for the control of arterial hypertension.

METHODOLOGY

The study was a literature review in the LILACS, BVS and SciELO databases in the period from 2008 to 2021, using the descriptors “Hypertension” and “Diet Hypertension”, with the Boolean operator AND between them.

A total of 47 articles were found, using the inclusion criteria as the abstracts available in full, published in Portuguese, English or Spanish, carried out in human beings, which addressed topics related to hypertension, food and nutrition education. Studies in which the approach to the theme was not effective were obliterated, thus only 25 articles were selected for the review. Therefore, this study addressed the symptoms, complications, risk factors, genetic factors of arterial hypertension and also all health care for hypertensive patients.

Thus, this review hopes to raise the level of knowledge about the nutritional and socioeconomic profile of the analyzed individuals, in order to favor the development of healthy lifestyle habits and skills, which in turn will allow adequate decisions to be taken to control high blood pressure. Improve the quality of life for this group of patients, avoiding complications and death, providing general information about the definition, treatment, symptoms and risk factors associated with high blood pressure, importance of treatment, diet and physical exercise.

Through the authors identified in the review, some themes and subthemes described in the presented results were obtained. It is understood that, after the dissemination of the study carried out on the basis of the VHL, we can contribute to the knowledge of health professionals, as well as the general population.

RESULTS AND DISCUSSION

The study showed that among the nutritional factors that are associated with the high prevalence of SAH are the high consumption of alcohol, sodium and excess weight. Being associated with the consumption of potassium, calcium and magnesium, which would attenuate the progressive increase in blood pressure levels with age. Another study observed that in individuals with

SAH it was observed that the DASH diet (Dietary Approaches to Stop Hypertension) substantially reduced blood pressure (systolic: 5.5 mmHg) within two months and, when combined with sodium reduction, there was additional drop in blood pressure (systolic: 8.9 mmHg). Another analysis pointed out as one of the results of the educational action a growing and complex degree of learning, contributing to the construction of knowledge of the participants.

SYMPTOMS OF HYPERTENSION

A major problem with SAH is the fact that it is atypical until it reaches the very advanced stages of the disease. There is no specific symptom that serves as an alarm to encourage the individual to seek medical attention. In most men and women, high blood pressure does not cause symptoms, despite the appearance of certain symptoms that many, mistakenly, consider part of the disease, such as dizziness, tiredness, headaches, facial flushing and nosebleeds. (PINHEIRO, 2009).

The symptom that could be more frequently and exclusively observed in a hypertensive individual is headache. Suboccipital, throbbing headache, which occurs in the early hours of the morning and lasts throughout the day, is referred to as a characteristic, however any type of headache can occur in hypertensive individuals. Hypertensive hypertension of rapid growth (malignant hypertension) is related to drowsiness, cerebral and visual disorders, nausea and vomiting (arteriolar vasoconstriction and cerebral edema), characterizing hypertensive encephalopathy. In addition to the symptoms, such as epistaxis and scintillating scotomas, tinnitus and fatigue, they are also nonspecific, and are no longer considered pathognomonic for the diagnosis of arterial hypertension. (OIGMAN, 2014).

COMPLICATIONS OF HYPERTENSION

According to Radovanovic et al (2014) arterial hypertension causes cardiac and cerebrovascular complications in the lives of patients, being identified as a public health problem worldwide. In 2000, the prevalence of AH in the international population was 25% and the estimate for the year 2025 is 29%. Studies carried out in Brazil revealed that the prevalence of hypertension varied between 22.3 and 43.9%, with an average of 32.5%.

According to the Brazilian Society of Cardiology (2010), heart disease is any modification that alters the hemodynamics of the circulatory system. Coronary artery disease, stroke, peripheral artery disease, congestive heart failure and kidney disease are also included as CVD.

According to Pereira et al (2011) the most common complications that may indicate problems in the cardiovascular system are: tachycardia, angina (chest pain), indigestion, nausea, intense sweating, fatigue, fainting. As mentioned above, arterial hypertension can also cause cerebrovascular complications. There is a very close relationship between cerebrovascular diseases and high blood pressure. The brain is often the agent responsible for AH and at the same time the main victim of this disease. (GAGLIARDI, 2009).

The brain is generally the organ that suffers the consequences of AH earlier and more intensely. Commitment is early and progressive; the longer the time of exposure to AH, the greater the risk, and the higher the rates of AH, the greater the complications. The complications that exist in the most apparent cerebrovascular pathologies are aneurysms and cerebrovascular accident (CVA), (GAGLIARDI, 2009). In view of the presented statements, different cardiac and cerebrovascular complications exist

in a population of patients with arterial hypertension, causing several obstacles in their quality of life.

RISK FACTORS FOR HIGH BLOOD PRESSURE

AH is a disease that affects a large part of the population, and several risk factors are the causes of the growth of AH. Among them we have the following:

AGE

There is a direct and linear relationship between BP and age, with the prevalence of SAH being greater than 60% in the age group above 65 years. Currently, risk factors for the development of the disease have been shown to be present in individuals at an early age. Studies have shown that such risk factors developed during childhood and adolescence tend to persist into adulthood. The very noticeable increase in the occurrence of obesity in the youngest population in the world has been a cause for great concern, since this condition is associated with the emergence of chronic-degenerative disorders, such as the arterial hypertension. (SBC, 2006).

SALT

Societies that have a hypersodic diet are more likely to have high levels of AH in the individuals who live there. The Brazilian population has a dietary pattern rich in salt, sugar and fat. On the other hand, in populations with a diet low in salt, such as the Brazilian Yanomami Indians, no cases of SAH were found. (V DBH, 2006).

SEDENTARY LIFESTYLE

Physical activity is an important cardiovascular prevention factor and is part of the treatment of arterial hypertension. Physical activity is able to reduce the incidence of hypertension, even in pre-hypertensive

individuals, in addition to reducing mortality and lower cardiovascular risk(SBC, 2010). Physical activity reduces the incidence of SAH, even in pre-hypertensive individuals, as well as mortality(PESCATELLO, 2004).

According to the V Brazilian Guideline on Arterial Hypertension (2006), sedentary individuals have a greater risk, approximately 30%, of developing hypertension than active individuals.

SMOKING

According to Smeltzer and Bare (2002), nicotine causes a decrease in the internal volume of the arteries, which causes stiffness of the arterial walls or arteriosclerosis, in addition to the acceleration of the heart rate and, consequently, hypertension.

Smoking increases cardiovascular risk mainly due to its actions on the autonomic nervous system and endothelial function. The increase in systemic blood pressure caused by smoking plays an important role in the resulting increase in morbidity and mortality. (SBC, 2010).As a preventive measure we have:

HEALTH CARE FOR HYPERTENSIVE PATIENTS

AH is the main factor for cardiovascular diseases (CVD) and its domain has a great impact on morbidity and mortality rates due to CVD, being responsible for several hospitalizations, high medical and socioeconomic costs. Given the size of the problem, it is necessary that preventive measures be taken to contain its advance, not only with emphasis on the diagnosis and treatment of individuals already affected, but mainly on the implementation of far-reaching population strategies in order to prevent the onset of the disease. (WILLIAMS B., 2010).

Primary prevention measures are actions and strategies that precede the development of diseases. Among the measures we can

mention: changing lifestyle and medication measures. Lifestyle changes are the most recommended for the prevention of AH. Lifestyle changes reduce BP and consequently cardiovascular mortality rates (JBP, 2004).

Healthy life habits must be practiced from childhood to prevent diseases in general and especially cardiovascular diseases. The main recommendations for the primary prevention of AH are: having a healthy diet, physical activity, combating smoking and ingesting little sodium and alcohol(VI DBH, 2010). Population-based strategies are implemented with the aim of making everyone aware of hypertension and thus being able to prevent it.(AMODEO, 2010).

Drug measures are only recommended when there is a high risk of cardiovascular disease or very high risk. Analyzing the studies by TROPHY and PHARAO, it is noted that the drug strategy was well tolerated and prevented the development of SAH in high-risk young populations(VI DBH, 2010).

NON-PHARMACOLOGICAL TREATMENT

Non-pharmacological treatment is based on measures that have a strong influence on the effectiveness of the control, among which are: dietary changes, body weight reduction, reduction in salt intake and alcohol consumption, implementation of healthy physical activity habits and avoidance of habits like smoking. Potassium-rich diets and elimination of tobacco and caffeine consumption are also listed as effective measures to control blood pressure. (SBH, 2006).

Study carried out by Jesus et al. (2008), identified that after a walking program for individuals with SAH, it was noticed that they showed improvement in physical fitness, in the variations of systolic and diastolic blood pressure, that is, this shows that doing

physical activity improves the conditions of hypertensive patients and how important it is to have a healthy life.

FINAL CONSIDERATIONS

In view of the above, it was possible to observe that the therapeutic intervention and control of SAH requires behavioral changes in relation to diet, medication intake and lifestyle, therefore, nutritional education for hypertensive patients becomes of great importance, as it is a factor essential for controlling hypertension and developing healthy habits.

In addition, it is worth noting that lifestyle changes are the most recommended for the prevention of AH, as they reduce BP. These are simple changes, such as having a healthy diet, practicing physical activity, ingesting little sodium and alcohol, avoiding smoking that will consequently help to avoid, reduce or delay the disease and death caused by it.

Some authors cited in the study reinforce the importance of constant monitoring and preventive actions that guide the necessary care, avoiding complications that hypertension causes in the individual.

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