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ORIGINAL ARTICLE

Factors associated with the level of knowledge about hypertension in primary care patients

Á.R. Lugo-Mata[a,b,*], A.S. Urich-Landeta[a,b], A.L. Andrades-Pérez[a,b], M.J. León-Dugarte[a,b], L.A. Marcano-Acevedo[a,b], M.H. Jofreed López Guillen[a]

[a] *School of Health Sciences ''Dr. Francisco Battistini Casalta'', University of Oriente-Bolivar Nucleus, Venezuela*
[b] *Scientific Society of Medical Students at the University of Oriente-Bolivar Nucleus, Venezuela*

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Abstract
Introduction: Arterial hypertension is still a public health problem. Knowledge about the disease allows adequate management from prevention to treatment, and a better knowledge has also been associated with better adherence to the treatment.
Objective: To determine factors associated with the level of knowledge about arterial hypertension in primary care patients.
Materials and methods: A non-experimental, cross-sectional, and analytical study was performed with a convenience sample using a structured survey to measure the level of knowledge about arterial hypertension. Frequency calculations and multivariate analysis were performed to determine the association between several factors with the level of knowledge, is considered statistically significant at $p < 0.05$.
Results: Of 188 participants, 68.09% were females, the average age was 45.37 years old, 35.11% had a diagnosis of arterial hypertension, and 68.09% had a family history of arterial hypertension. The level of knowledge was medium and was associated with age ($p = 0.01$), previous diagnosis of hypertension ($p = 0.01$) and a family history of hypertension ($p = 0.001$). No association was found with genders, educational level or body mass index.
Conclusions: Some factors are associated with a greater knowledge about arterial hypertension, knowing them allows us to adapt public policies and educational interventions for patients who require it most.

* Corresponding author at: Calle Angostura #13, Ciudad Bolívar, Estado Bolívar, Venezuela. Tel.: +58 4148650380.
E-mail address: alugomata@gmail.com (Á.R. Lugo-Mata).

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Introduction

According to the World Health Organization (WHO) arterial hypertension (HTN), is a public health problem that currently affects 40% of the worldwide population. The incidence of hypertension varies among different countries, the most affected ones are developing countries.[1] In Venezuela, it is estimated that for every 100 people, 34 suffer from hypertension and more than 80% of those cases are not controlled.[2,3] Its frequency increases with age, also observing that before 55 years, men are more likely to have high blood pressure, but after 55, women are more likely to have it than men. The most affected people are African descent, obese, those with a high consumption of sodium, people with low levels of physical activity, smokers and those with excessive alcohol intake.[4,5]

Hypertension usually does not present symptoms, which is why it often goes unnoticed, although occasionally headache, respiratory distress, dizziness, chest pain, palpitations or nosebleeds may be evident.[1] Uncontrolled hypertension can lead to ventricular hypertrophy, myocardial infarctions, heart failure, hypertensive retinopathy, strokes and chronic renal failure.[6] Among these complications, the highest percentage of deaths is due to coronary heart disease or heart failure.[7]

Although there are risk factors for HTN that cannot be modified, such as family history, gender, age and race, there are others that can, such as weight, physical activity level, alcohol intake, tobacco consumption, and diet.[8] Knowledge of these factors is essential in the prevention, management, and control of HTN. Also, the patient must inform the health staff about complications and consequences arising from HTN, and in those who suffer from the disease, always remind them that it is a chronic disorder and the treatment is for life.[3]

Studies worldwide have reported deficiencies in the knowledge of hypertension in patients who suffer from it.[9,10] However, no previous studies comparing knowledge between hypertensive and non-hypertensive patients were found. In addition, it is estimated that between 30 and 50% of hypertensive patients are unaware that they have the disease.[11,12] People at risk of suffering HTN must be educated early and periodically assess their health status so that at the time of their diagnosis, they have a higher knowledge level and adhere better to therapeutic guidelines.

The present study aims to determine the factors associated with the level of knowledge about hypertension in primary care patients, both hypertensive and non-hypertensive, which is unknown in our population, and may be useful to guide educational campaigns to specific groups. In addition, to knowing the population's knowledge about the disease according to different parameters.

Materials and methods

A non-experimental, analytical, cross-sectional investigation was carried out through the application of an anonymous survey to patients who attended HTN screening in the ''Simon Bolivar'' and ''Petra Emilia Moreno'' Urban Outpatient Clinics of Bolivar City-Venezuela during December 2016.

The sample was non-probabilistic, including all the patients who attended the consultation in said health centers and wished to participate voluntarily in HTN screening. Of 225 patients who were attended, 188 (83.56%) were included in the study. Those who refused to participate in the study and who came for an emergency or with a clinical condition that prevented them from answering for themselves were excluded.

The survey was designed and validated (ad-hoc) by experts in public health. It consisted of 15 multiple choice questions, with a single correct answer, about general aspects of hypertension: normal blood pressure numbers, symptomatology, prevention, treatment, and complications. Prior to the application of the survey, sociodemographic information on the patients was collected: gender, age, education level, previous diagnosis of HTN and family history. A blood pressure measurement was carried out following the recommendations of the Venezuelan Society of Cardiology[13] and was classified according to the Seventh Report of the Joint National Committee for the Prevention, Detection, Evaluation, and Treatment of Arterial Hypertension. Also, height and weight measurements were taken to calculate body mass index (BMI).

To measure the level of knowledge, a score from 0 to 10 was awarded based on the 15 questions. A score lower than five was considered a low level of knowledge, a score between 5 and 7was considered an average level of knowledge, and a score higher than 7 was considered a high level of knowledge.

The information was tabulated in Microsoft Excel 2013, and statistical analysis was performed with SPSS version 15 for Windows. To determine the association between gender, age, educational level, previous diagnosis of HTN, family history of HTN and BMI with the level of knowledge, a multivariate regression analysis was performed, considering a value of $p < 0.05$ statistically significant.

Ethical considerations: Participation in the study was voluntary, with prior informed consent and information about the research that was carried out. The survey was delivered and collected by the authors, maintaining the anonymity of the participants at all times. Participation in the study did not represent any risk to the patient at any time.

Results

The sample consisted of 188 individuals, of which 68.09% corresponded to the female sex. The average age was 45.37 years, and the most frequent age group was 30 to 39 years old (23.94%), followed by the group from 50 to 59 years old (23.40%). Of the participants, 78.19% had at least secondary education completed. 35.11%had already been diagnosed as hypertensive person, and 68.09% had a family history of hypertension (see Table 1). Of patients who had not been diagnosed as hypertensive, 13.93% had blood pressure numbers corresponding to stage 1 or 2 of hypertension. Of the sample, 86.17% recognized the normal blood pressure numbers correctly; 75.53% believed that HTN was preventable, and 53.13% said it was curable. The lowest percentages of correct answers corresponded to the questions about the symptoms; 87.77% erroneously indicated that the majority of people have headaches and 89.89% said they get