

Risk Factors for Arterial Hypertension in Women Seen in a Medical Office at the Orlando Matos Mosqueda Polyclinic-2022

Rene Jorge Mena Mujica^{1*}, Ana Ivis Estrada Casteleiro², Elisa Maria Puentes Rizo³ and Pedro Rolando López Rodríguez⁴

¹First Degree Specialist in Comprehensive General Medicine, Assistant Professor, Master in Primary Health Care and Higher Medical Education, Cuba

²First Degree Specialist in Comprehensive General Medicine, Assistant Professor, Master in primary Health Care and Higher Medical Education, Cuba

³First- and Second-degree Specialist in Comprehensive General Medicine, Assistant Professor, Master in Primary Health Care and Higher Medical Education, Cuba

⁴First- and Second-degree Specialist in General Surgery, Assistant Professor, Assistant Researcher, Consultant Professor, Cuba

ABSTRACT

Introduction: Hypertension is one of the most frequent chronic diseases in Cuba. In our country the prevalence is 70% and is proportional to the years of life. More than 30% of the adult population suffers from it, causing high morbidity and mortality.

Objective: To describe the main risk factors in women with arterial hypertension of the doctor's office 2 of the Párraga health area in the year 2021.

Methods: An epidemiological, observational, descriptive and cross-sectional study was carried out in a universe of 153 female patients with arterial hypertension. Sociodemographic and epidemiological variables were studied.

Results: 39.8% corresponded to patients between 41 and 50 years old, with a weight above the normal value in 40.5%. 62 women did not finish high school and the most frequent toxic habit was coffee consumption in 69.3%. More than 70% are heavy consumers of salt. 58 patients had a history of medication intake, prevailing the intake of non-steroidal anti-inflammatory drugs in 18.3%.

Conclusions: The age group of 41 to 50 years prevailed, with unfinished secondary school level and housewives, a high percentage of them is above the ideal weight and coffee intake, smoking, salt consumption and the previous intake of medications continue to behave as the main risk factors in the disease.

*Corresponding author

Rene Jorge Mena Mujica, Calle Calixto Garcia No.8, between Jaruco and Oriente. Parraga. Arroyo Naranjo. Havana. Cuba. Tel: +53 76447320, E-mail: rene.mena@infomed.sld.cu

Received: August 13, 2022; **Accepted:** August 19, 2022; **Published:** August 26, 2022

Keywords: Arterial Hypertension; Female Gender; Cardiovascular Risk Factors; Prevention

Introduction

Arterial hypertension (HTN) is the main risk factor for the global burden of morbidity and mortality and it is estimated that it causes more than half of the annual deaths attributed to cardiovascular diseases, constituting one of the main risk factors related to mortality from non-communicable diseases in Cuba [1,2]. A large proportion of these conditions and the premature deaths they cause can be avoided through measures aimed at controlling modifiable risk factors, such as reducing or eliminating tobacco use and improving health education aimed at controlling risk factors [3]. Between 20 and 30% of the world population suffers from AHT, so it is estimated that by 2025 there will be 1.5 billion people diagnosed with this condition and the detection and control of risk factors continues to be the strategy essential to prevent them [4,5]. In the American continent, about 140 million people suffer from hypertension, of which between 8 and 30% live in Latin

America and the Caribbean. It is estimated that over the next 10 years there will be 20.7 million deaths from cardiovascular disease, of which some 2.4 million will be attributable to hypertension in the Americas region [6]. At the end of 2019, heart diseases continued to be the main cause of death in Cuba, occupying the first place with 26,736 deaths for a rate of 238.1 per 100,000 inhabitants and within these, ischemic diseases were the ones with the highest frequency and, secondly, hypertensive [7]. In studies carried out on the subject, a series of risk factors related to this disease are described, such as: stress, obesity, sedentary lifestyle, smoking, diet (rich in saturated fats and salt), skin color, heredity, diabetes mellitus and hypercholesterolemia [8]. For its part, the estrogen deficiency that occurs in women after menopause has also been related to an increase in cardiovascular risk [9]. In fact, the National Cholesterol Education Program recognizes postmenopausal status as a risk factor for cardiovascular disease, assigning it the same weight as being male [10]. According to the statistics indicated, the high frequency of arterial hypertension constitutes a real health problem in Cuba and according to the

experience of the authors of this study, it has been possible to verify that there is no adequate and homogeneous response on the part of hypertensive patients in relation to knowledge about the importance of preventing risk factors, hence the importance of research that will allow an approach to the knowledge of the way in which they influence the disease of our patients.

Methods

An epidemiological, observational, descriptive and cross-sectional study was carried out with the objective of characterizing the main risk factors of Arterial Hypertension in hypertensive women belonging to the clinic # 2 of the Párraga Polyclinic in the year 2021. Empirical methods were used (observation, questionnaire and surveys), theoretical (analysis and synthesis, historical - logical, induction and deduction) and statistics that collected, analyzed, interpreted and presented all the information through frequency measurements. The universe consisted of 153 women over 18 years of age diagnosed with essential hypertension and who met the inclusion criteria of residing in the health area at the time the research was carried out, who agreed to participate and who was psychologically fit. The sample matches the universe. It was explained to each of them that the results obtained in the research would be used for their presentation in scientific events and biomedical journals, and they could leave the event at any time they so requested. Sociodemographic and clinical variables were defined: age, nutritional status, schooling, toxic habits, salt intake and previous medication intake. The primary data was obtained from a questionnaire prepared by the authors. The texts and tables were processed in Microsoft Word. For the analysis and discussion of the results, descriptive statistics were preferably used, which allowed reaching the objectives of the work and reaching its final conclusions. The results were expressed through absolute numbers and percentages and represented in statistical tables.

Results

Table 1: Distribution of hypertensive patients according to age

Age Grupos	Quantity	%
Less Than 20	1	0,65
21-30	3	1,96
31-40	9	5,88
41-50	61	39,86
51-60	42	27,45
61 and over	37	24,18
Total	153	100,00

Source; Survey

The age group from 41 to 50 years prevailed with 61 patients for 39.86% followed by the group from 51 to 60 with 27.45%. The leading level was reached from the age of 40.

Table 2: Distribution of hypertensive patients according to nutritional status

Nutritional Condition	Number	%
Underweight	12	7,84
Normal Weight	79	51,63
Overweight	43	28,10
Obese	19	12,41
Total	153	100,0

Source: Survey

The table above shows that 43 patients, 28.1% of all hypertensive women, have a weight above the normal value and 79 patients (51.63%) have adequate weight. Only 12 patients (7.84%) had poor nutritional status.

Table 3: Distribution of hypertensives according to schooling

Education	Quantity	%
illiterate	2	1,31
Unfinished Elementary School	3	1,96
Primary Finished	10	6,53
High School not finished	62	40,52
Unfinished pre-university	25	16,33
University	6	3,92
Total	153	100,0

Source: Survey

In table number 3 it is observed that the highest percentage of the women under study have not completed secondary education, representing 40.52% of the total, only 6 (3.92%) are university students and if we add the values of primary studies unfinished, finished and illiterate, a value of 9.8% is reached.

Table 4: Distribution of hypertensive patients according to toxic habits

Habits	Number	%
Smoking	47	30,7
Coffee Intake	106	69,3
No Habit	0	0
Total	153	100,0

Source: Survey

The table above expresses, in relation to toxic habits, that the most frequent is coffee consumption with 69.3% and smoking with 30.7% of the total number of patients studied. About a third of all women smoke and coffee intake appears in more than 70%.

Tabla 5: Distribución de hipertensas de acuerdo a ingesta de sal

Habits	Number	%
Normal salt consumers	22	30,7
Excessive salt intake	131	69,3
Total	153	0

Source: Survey

It can be seen that 85.6% of our patients are heavy salt consumers, despite the etiological role of salt consumption in the development of hypertension.

Table 6: Distribution of hypertensive patients according to drug intake

Medications	Number	%
Non-steroidal anti-inflammatory	28	18,3
Steroids	3	1,9
Tricyclic antidepressants	13	8,5
Oral contraceptives	14	9,15
Total	58	38,0

Source: Survey n= 153

Table 6 shows the distribution according to previous intake of medications that act as a risk factor for hypertension, 58 (38.0%) patients had a history of taking one or another medication, with the intake of non-steroidal anti-inflammatory drugs prevailing in 18.3%, almost double that of oral contraceptives, which constituted 9.15% of the total.

Discussion

In the research carried out, from 40 years of age the risk of suffering from hypertension increases in the women studied. Studies confirm this result, mainly due to the loss of elasticity of the large arteries and an increase in vasoconstrictor stimuli potentiated by the increase in the thickness of the middle layer and the ventricular mass [11]. Most of our patients were in the group between 41 and 50 years old and followed by hypertensive women between 51 and 60 years old, coinciding with a study published by Hechavarría, who found that as age increased, so did the number of hypertensive patients. García, in an investigation with similar characteristics, found that 51.06% of the patients were between 40 and 59 years old, which is related to what was found in our study, and for his part, Martínez published that in their casuistry, the most frequent ages of hypertensive patients corresponded to adults over 60 years of age, which does not coincide with our results. A considerable number of the women under study were overweight or obese, this being considered a primary risk factor in hypertension. A significant reduction in overweight and obesity could have prevented, in one year, the death of 3,789 Cubans, 2,511 women and 1,278 men; 940 diabetic patients, 821 people diagnosed with cancer in the locations that were explored, and 2,024 deaths in people with cardiovascular disease [12-15]. According to the III risk survey carried out in Cuba (16), overweight and obesity in global terms are increasing in the Cuban population and especially in women. In a study carried out in Mexico by Iñigo Riesgo et al., 33% of overweight and 30% of obesity are reported, for 63% of excess weight in women and Suncho reports 66.4% in the Polyclinic "April 19", values higher than the one found in our study, but Most of the patients that make up the study have not finished secondary education and almost a tenth of them did not finish primary studies or are illiterate. Monterrey agrees with these findings, but other authors conclude that there is no significant relationship between level of schooling and adherence to treatment [16-21]. It is considered that patients with completed pre-university and university studies have a higher level of knowledge and have a greater perception more realistic of the risk that this disease implies [19]. Coffee consumption, together with smoking, constituted the most frequent toxic habits in the patients studied. Numerous studies show the risk that these constitute in hypertension and identify them as modifiable factors related to unhealthy lifestyles [22-25]. Coffee consumption raises systolic and diastolic blood pressure figures

up to 14 and 10 mm/Hg respectively with the daily consumption of 2 to 4 cups of coffee and it has been shown that smoking is a factor involved in the etiopathogenesis of essential hypertension and determines a worse prognosis in hypertensive patients A large proportion of cardiovascular diseases and deaths as a result of these can be avoided if risk factors are controlled and in the diet, reducing salt intake may be the greatest contributor to prevention [26-30]. Excessive consumption of sodium plays an important role in hypertension, since salt is considered one of the most harmful precursors, producing changes in the fibrocytes between smooth muscle cells, causing the accumulation of collagen in the arterial walls and as a consequence decrease in elasticity is presented [31,32]. It can also be associated with decreased kidney function caused by aging, which causes sodium retention and therefore an increase in circulatory volume [33]. It is known that the most unnoticed adverse drug reactions are not the ones that produce a disease, but those that cause worsening of a disease already treated [34]. In a study on potentially inappropriate prescriptions in older adults carried out in the municipality of San Miguel del Padrón in Havana, it was found that the pharmacological group most used in treatment was non-steroidal anti-inflammatory drugs, which coincides with our results [35,36].

Conclusion

Arterial hypertension was more frequent in patients aged 41-50 years with a secondary school level and with a weight above normal value. Among the toxic habits found, ingestion of coffee was the most frequent and excessive consumption of salt appears in the largest number of patients studied. The previous intake of medications was not frequent, being the consumption of non-steroidal anti-inflammatory drugs the one that prevailed. Conflicts of Interest: The authors declare no conflicts of interest.

References

1. Organización Panamericana de la Salud, SHAKE menos sal, más salud (2018) Guía técnica para reducir el consumo de sal. Washington, D.C.: OPS; [acceso: 29/07/2020]. Disponible en: <http://iris.paho.org>.
2. Landrove Rodríguez O, Morejón Giraltoni A, Venero-Fernández S, Suárez-Medina R, Almaguer-López M, et al. (2018) Enfermedades no transmisibles: factores de riesgo y acciones para su prevención y control en Cuba. Rev Panam Salud Pública 42: e23.
3. Yusuf S, Joseph P, Rangarajan S, Islam S, Mentz A, et al. (2020) Modifiable risk factors, cardiovascular disease, and mortality in 155 722 individuals from 21 high-income, middle-income, and low-income countries (PURE): a prospective cohort study. Lancet 395:795-808.
4. Quenta Tarqui RR, Madiedo Oropesa A (2016) Caracterización epidemiológica de la hipertensión arterial en un Consultorio Médico del municipio Viñales, Pinar del Río, Cuba. CorSalud [Internet]. 8: 235240. Disponible en: www.medigraphic.com/pdfs/corsalud/cor-2016/cor164d.pdf2.
5. Morón Rodríguez F. Farmacología Clínica (2010) 2ed. Tomo I. La Habana: ECIMED p133.
6. Paramio A, Letrán Y, Requesen RL, Hernández M (2021) Riesgo Cardiovascular Global en el consultorio 10 del Policlínico Mártires de Calabazar. Municipio Boyeros. Rev Cubana Cardiol Cir Cardiovasc 27: <http://www.revcardiologia.sld.cu/>.
7. González Sánchez D, Llapur Milián DR (2017) Tratamiento de la hipertensión arterial en niños y adolescentes. Rev Cubana Pediatr Disponible en: Disponible en 89: <http://www.revpediatria.sld.cu/index.php/ped/article/view/268>.
8. Ministerio de Salud Pública (2019) Dirección nacional de

- registros médicos y estadísticas de salud. Anuario estadístico. [citado 26 Junio 2020]. Disponible en: <https://files.sld.cu/bvscuba/files/2020/05/Anuario-Electrónico-Español-2019-ed-2020.pdf>
9. Berenguer Guarnaluses LJ (2016) Algunas consideraciones sobre la hipertensión arterial. *Medisan* (Santiago de Cuba) 20: 2434-2438.
 10. El Khoudary SR, Shields KJ, Janssen I, Hanley C, Budoff MJ, et al. (2015) Cardiovascular fat, menopause, and sex hormones in women: the SWAN cardiovascular fat ancillary study. *J Clin Endocrinol Metab* 100: 3304-3312.
 11. Grundy SM (1994) Guidelines for cholesterol management: recommendations of the National Cholesterol Education Program's Adult Treatment Panel II. *Heart Dis Stroke* 3: 123-127.
 12. Kou S, Li X, Blanco Aspiazú MÁ (2018) Mecanismos de comorbilidad en hipertensión arterial. *Rev haban cienc méd* 17: 58-72.
 13. Hechavarría Torres M, Fernández Álvarez N, Betancourt Llopiz I (2014) Caracterización de pacientes con hipertensión arterial en un área rural de Santiago de Cuba. *MEDISAN* 18: 509.
 14. García Leal Z, Junco González I, Cordero Cabrera M, García Veloz M, Rodríguez Mazó YC (2013) Caracterización clínico-epidemiológica de la hipertensión arterial en el Consultorio Médico 24. *Rev. Ciencias Médicas* 17: 84-93.
 15. Martínez Cabrera M, Gort Hernández M (2015) Factores de riesgo en pacientes hipertensos en el Hospital Patacamaya, La Paz. *Rev. Ciencias Médicas* 19: 938-47.
 16. Varona Pérez Patricia, Gámez Sánchez Donelia, Díaz Sánchez María Elena (2018) Impacto del sobrepeso y obesidad en la mortalidad por enfermedades no transmisibles en Cuba. *Rev Cubana Med Gen Integr* 34: 71-81.
 17. Bonet Gorbea M, Varona Pérez P (2014) III Encuesta nacional de factores de riesgo y actividades preventivas de enfermedades no transmisibles. Cuba 2010-2011. La Habana: Editorial Ciencias Médicas http://www.bvs.sld.cu/libros/encuesta_nacional_riesgo/indice_p.htm.
 18. Iñigo Riesgo CA, Torres Gómez LG, Lofte Navarro CA, Cortés Sanabria L, Godoy Muzquiz R (2009) Factores de riesgo cardiovascular en el climaterio. *Ginecol Obstet Mex* 77: 535-543.
 19. Shunchao K (2015) Obesidad total y abdominal, su relación con algunos factores de riesgo de enfermedad cardiovascular [tesis maestría]. La Habana: Centro de Investigaciones y Referencias de Aterosclerosis de la Habana 82p.
 20. Monterrey M, Linares LB, Toledo R, Vázquez A, Rivera D, et al. (2021) Adherencia farmacológica y calidad de vida relacionada con la salud en adultos mayores hipertensos. *Rev Ciencias Médicas Pinar del Río* 25: 10p.
 21. Galarza EG (2016) Estrategia motivacional sobre adherencia terapéutica en adultos hipertensos del barrio Las Guayusas, 2015-2016 [Internet]. Riobamba: Escuela Superior Politécnica de Chimborazo Disponible en: <https://dspace.espace.edu.ec/handle/123456789/5885>.
 22. Pomares AJ, Vázquez MA, Ruíz ES (2017) Adherencia terapéutica en pacientes con hipertensión arterial. *Finlay* 7:7p.
 23. Cedeño Fonseca DJ (2020) Factores de riesgo de Hipertensión Arterial en adultos. *Río Cauto. Multimed* 24: 14p.
 24. Ávila Lillo C (2015) LA hipertensión arterial: IMPORTANCIA DE SU PREVENCIÓN [Tesis]. COMPLUTENSE: UNIVERSIDAD COMPLUTENSE.
 25. Romero M, Avendaño Olivares J, Vargas Fernández R, Runzer Colmenares F (2020) Diferencias según sexo en los factores asociados a hipertensión arterial en el Perú: Análisis de la Encuesta Demográfica y de Salud Familiar 2017. *An Fac med* 81: 33-39.
 26. Ali Pérez NA, Reyes Ali JF, Ramos Labrada N, Herrada Cuevas M, García Álvarez R (2018) Principales factores de riesgo de la hipertensión arterial en trabajadores del Banco de Sangre Provincial "Renato Guitart Rosell". *MEDISAN* 22:8p.
 27. Kuczmarski RJ, Flegal KM, Campbell SM, Johnson CL (2004) Increasing prevalence of overweight among US adults. *The National Health and Nutrition Examination Surveys, 1960-1991. J Am Assoc* 272: 205-211.
 28. Stamler J (2001) Blood Pressure and High Blood Pressure. Aspects of Rise. *Hypertension* 18: 1-95 - 1-107.
 29. Yusuf S, Joseph P, Rangarajan S, Islam S, Mentz A, et al. (2020) Modifiable risk factors, cardiovascular disease, and mortality in 155 722 individuals from 21 high-income, middle-income, and low-income countries (PURE): a prospective cohort study. *Lancet* 395: 795-808.
 30. Organización Mundial de la Salud (2017) Enfermedades cardiovasculares. [Internet]. Ginebra: OMS; [Citado 12/04/2020]. Disponible en: [https://www.who.int/es/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/es/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds)).
 31. World Health Organization (2013) A global brief on hypertension [Internet]. Ginebra: WHO; [Citado 03/05/2020]. Disponible en: https://www.who.int/cardiovascular_diseases/publications/global_brief_hypertension/en/.
 32. Aranda C (2019) Manejo de la hipertensión arterial en el adulto mayor. *Med Interna Mex* 35: 515-24.
 33. Pérez M, León J, Dueñas A, Alfonso J, Navarro D, et al. (2017) Guía cubana de diagnóstico, evaluación y tratamiento de la hipertensión arterial. *Rev Cubana Med* 56: 242-321.
 34. Jeton Balarezo DP, Pasato Alvarez SG (2017) Factores Predisponentes a Hipertensión Arterial En Adultos De 40 a 65 Años De Edad, Centro De Salud "San Fernando". *Cuenca* 2016, 79p.
 35. Morales FJ, Ferrer JM, Palop V (1992) Hipertensión arterial inducida por medicamentos. *Hipertensión*, 9: 331-333.
 36. Díaz Molina M, Herrera Preval Y (2021) Prescripciones potencialmente inadecuadas en adultos mayores del municipio San Miguel del Padrón, La Habana, Cuba. *Revista Cubana de Farmacia* Disponible en: <http://www.revfarmacia.sld.cu/index.php/far/article/view/508>.

Copyright: ©2022 Rene Jorge Mena Mujica, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.