



Behavior of Eating Habits in Hypertensive Older Adults

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ABSTRACT

Introduction: arterial hypertension is a major public health problem with high prevalence and morbidity, closely associated with inadequate dietary habits.

Objective: to describe the eating habits of hypertensive older adults treated at the "Dr. León Cuervo Rubio" Clinical Surgical Teaching Hospital.

Methods: an observational, descriptive, cross-sectional study was conducted in a sample of 154 hypertensive older adults treated between 2021 and 2024 at this institution. Structured questionnaires and documentary review of medical records were applied to investigate the frequency and type of foods consumed. Sociodemographic, clinical, and dietary variables were analyzed. Data were processed using descriptive statistical methods. The study complied with bioethical principles and obtained institutional approval.

Results: the age group 60–69 years predominated (49,4 %), with a slight male majority (51,9 %) and secondary education as the most frequent level (43,5 %). A total of 48,7 % had ≥10 years since diagnosis, with a high prevalence of modifiable risk factors. Overweight and obese patients showed high consumption of cereals, fats, meats, and dairy, along with low intake of fruits and vegetables, while normal-weight individuals presented more protective patterns.

Conclusions: findings confirm that dietary habits are a determining factor in the control of arterial hypertension in older adults. The predominance of unfavorable dietary patterns associated with excess weight reinforces the need for specific nutritional interventions and community-based food education programs aimed at improving blood pressure control and reducing the burden of cardiovascular disease.

Keywords: Aged; Feeding Behavior; Nutritional Status; Risk Factors; Hypertension; Eating.

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INTRODUCTION

Eating habits constitute conscious, repetitive, and collective behaviors that guide the selection and consumption of foods, influenced by social, cultural, and family factors. In childhood and adolescence, these habits are molded with relative ease, while in adulthood and old age they tend to consolidate, making their modification difficult. In the case of older adults (OA), dietary patterns tend to be rooted in traditions and customs, which represents a challenge for the implementation of healthy changes. Arterial hypertension, a chronic disease of high prevalence, is closely related to diet quality, making eating habits a key factor for its prevention and control.⁽¹⁾

The World Health Organization (WHO) has pointed out that poor eating habits, such as excessive consumption of salt, saturated fats, and ultra-processed foods, are determinants in the development of arterial hypertension. This condition is defined as the chronic elevation of arterial pressure above 140 mmHg systolic and 90 mmHg diastolic. An inadequate diet not only increases the risk of hypertension but also favors cardiovascular and renal complications.⁽²⁾ In this context, hypertensive OA represent a particularly vulnerable group, since the persistence of harmful dietary patterns makes disease control difficult and increases associated morbimortality.

The impact of nutrition on health has been widely documented. The phrase "we are what we eat" synthesizes the direct relationship between diet and disease. Studies such as the Global Burden of Disease 2019 estimated that around eight million deaths were linked to dietary factors,⁽³⁾ while the American Heart Association emphasized the role of diet in the primary and secondary prevention of arterial hypertension.⁽⁴⁾ These findings reinforce the need to promote changes in lifestyles, especially in hypertensive OA, where modification of eating habits can be decisive for improving clinical prognosis.

Arterial hypertension constitutes a global public health problem, with an estimated prevalence between 15 and 30 % in various regions. According to the WHO, in 2024, there were approximately 1,4 billion people aged 30 to 79 years worldwide with this disease.⁽⁵⁾ In Cuba, prevalence reaches alarming figures, with rates exceeding 228 per 1,000 inhabitants, standing out in the groups aged 60 years and older.⁽⁶⁾ In provinces such as Pinar del Río, records show a sustained increase, which makes hypertensive OA a priority group for the implementation of prevention and control strategies.⁽⁷⁾

The etiology of arterial hypertension is multifactorial, involving genetic, environmental, and behavioral factors. Among these, eating habits play a central role. Excessive sodium consumption, present in condiments, sausages, and fast foods, is directly associated with elevated blood pressure figures. Research in Latin America has shown that more than 70 % of foods consumed by the population contain high levels of salt, which increases the risk of hypertension and cardiovascular diseases. In hypertensive OA, the persistence of these harmful dietary habits aggravates the clinical picture, increasing the probability of complications and reducing quality of life.^(8,9)

Arterial hypertension in OA constitutes a public health problem of great impact, closely linked to eating habits and lifestyles, whose approach requires comprehensive strategies that include nutritional education, community participation, and strengthened primary care, with the purpose of reducing complications and improving the quality of life of this population; in this context, the objective is to describe the eating habits of hypertensive OA treated at the "Dr. León Cuervo Rubio" Clinical-Surgical Teaching Hospital, as well as to evaluate the behavior of dementia syndrome in OA treated in the Geriatrics service of the same institution.

METHODS

Study design

An observational, descriptive, cross-sectional study was conducted at the "Dr. León Cuervo Rubio" Clinical-Surgical Teaching Hospital, in Pinar del Río, Cuba, during the period from September 2021 to June 2024. The population consisted of hypertensive patients aged 60 years and older, registered in the Geriatrics service. The sample was obtained through simple random probabilistic sampling, consisting of 154 patients who met the inclusion criteria (hypertensive OA who voluntarily decided to participate in the study) and exclusion criteria (OA with dementia, cognitive impairment, or terminal-stage diseases).

Procedures and techniques

Information was collected through documentary review of clinical histories and structured questionnaires applied to patients, which inquired about the frequency and type of foods consumed in the last three months. Sociodemographic variables (age, sex, education), clinical variables (time of evolution of hypertension, body mass index), and eating habits (type and frequency of consumption) were included.

Statistical analysis

Data were processed with the SPSS v.21 statistical package for Windows, which allowed information management. Descriptive methods were applied, including the calculation of absolute frequencies and percentages, in order to adequately characterize the variables studied. This approach guaranteed a clear interpretation of the results and facilitated the identification of relevant patterns in the analyzed population, providing a solid basis for scientific discussion and the formulation of reliable conclusions.

Ethical aspects

The research was conducted in compliance with the basic ethical principles: autonomy, beneficence, non-maleficence, and justice. The study was carried out with the approval of the ethics committee and scientific council of the institution. The information obtained was used only for scientific purposes.

RESULTS

Table 1 shows that most patients are concentrated in the 60-69 age group (49,4 %), followed by those aged 70-79 years (30,5 %). Male sex predominates slightly with 51,9 %; as for education, basic secondary (43,5 %) is the most frequent.

Table 1. Distribution of patients according to demographic profile. "Dr. León Cuervo Rubio" Clinical-Surgical Teaching Hospital, in Pinar del Río, Cuba

Variable		No.	%
Age	60-69	76	49,4
	70-79	47	30,5
	80-89	29	18,8
	≥ 90	2	1,3
Sex	Female	74	48,1
	Male	80	51,9
Education	Primary	28	18,2
	Secondary	67	43,5
	Technical secondary	23	14,9
	Pre-university	27	17,5
	University	9	5,9

Figure 1 reflects an upward trend over time with diagnosis, showing that most patients present a prolonged evolution of the disease. The group with ≥10 years since diagnosis concentrates the highest number of cases (48,7 %), followed by those with 5-10 years (34,4 %).

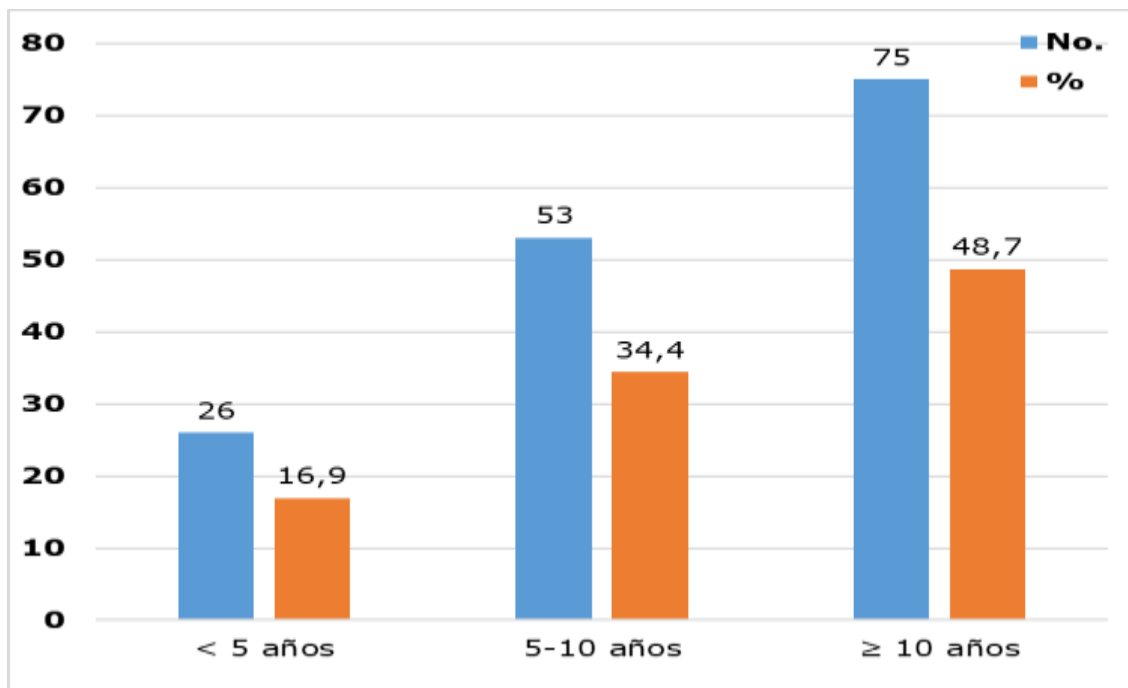


Fig. 1 Distribution of the sample according to time since diagnosis of the disease.

Figure 2 shows the distribution of patients according to the presence of risk factors, evidencing a high prevalence of inadequate nutrition (85,7 %) and smoking (78,6 %), followed by sedentary lifestyle (50,6 %) and obesity (44,8 %). These results reflect a predominance of modifiable factors, suggesting clear opportunities for preventive interventions and promotion of healthy lifestyles.

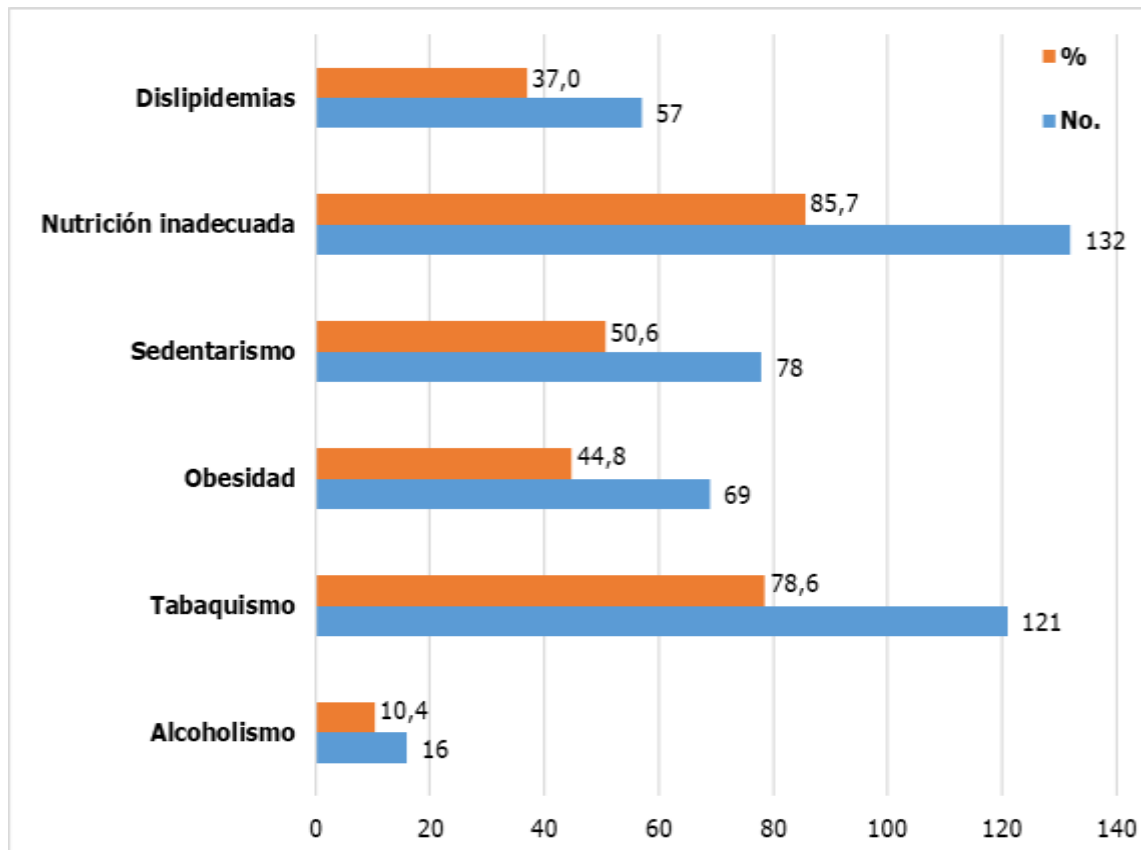


Fig. 2 Distribution of the sample according to the presence of risk factors.

Table 2 shows a direct relationship between eating habits and the nutritional assessment of hypertensive patients. Individuals with overweight and obesity present a high daily consumption of cereals, fats, meats, and dairy, while the intake of fruits and vegetables is low.

Table 2. Eating habits according to the nutritional assessment of hypertensive patients.

Eating habits		Nutritional assessment					
		Normal weight (n=7)		Overweight (n=78)		Obese (n=69)	
Foods	Frequency	No.	%	No.	%	No	%
Cereals, flours, tubers, and legumes	Daily	0	0	62	79,5	58	84,1
	1-3 times a month	2	28,6	14	17,9	9	13,0
	Never/Almost never	5	71,4	2	2,6	2	2,9
Dairy and derivatives	Daily	1	14,3	59	75,6	57	82,6
	1-3 times a month	4	57,1	15	19,2	12	17,4
	Never/Almost never	2	28,6	4	5,1	0	0
Meat, fish, eggs, sausages	Daily	1	14,3	44	56,4	52	75,4
	1-3 times a month	2	28,6	27	34,6	15	21,7
	Never/Almost never	4	57,1	7	9,0	2	2,9
Fats	Daily	0	0	54	69,2	61	88,4
	1-3 times a month	2	28,6	16	20,5	7	10,1
	Never/Almost never	5	71,4	8	10,3	1	1,4
Vegetables, legumes, and fruits	Daily	6	85,7	21	26,9	12	17,4
	1-3 times a month	1	14,3	19	24,4	18	26,1
	Never/Almost never	0	0	38	48,7	39	56,5
Sugars or sweets	Daily	1	14,3	41	52,6	52	75,4
	1-3 times a month	1	14,3	26	33,3	8	11,6
	Never/Almost never	5	71,4	11	14,1	9	13,0
Soft drinks	Daily	1	14,3	49	62,8	54	78,3
	1-3 times a month	2	28,6	17	21,8	8	11,6
	Never/Almost never	4	57,1	12	15,4	7	10,1

DISCUSSION

The age distribution of hypertensive patients in our study shows a clear predominance of the 60-69 age group (49,4 %), which coincides with what has been reported in recent Cuban research. In particular, Santiesteban et al.,⁽¹⁰⁾ identified that the 60-64 age group represented 39,1 % of hypertensive patients in Pinar del Río, confirming a trend toward early diagnosis in the elderly. This finding suggests that hypertension is concentrated in young OA, a stage in which the cumulative effects of risk factors and unhealthy lifestyles begin to manifest.

Regarding sex, our sample reflected a male predominance (51,9 %), which contrasts with national research such as the National Health Survey, which reported higher prevalence in women aged 65 years and older. This difference can be explained by regional variations and by greater female attendance at health services, which increases detection in that group.⁽⁶⁾ The male predominance observed could be linked to cultural and behavioral factors, such as lower adherence to medical check-ups and greater exposure to harmful habits, which reinforces the need for gender-differentiated strategies.

Regarding education, basic secondary was the predominant level in our sample (43,5 %), suggesting that medium educational levels are associated with greater risk of hypertension. International studies have pointed out that lower education is linked to inadequate dietary habits, lower therapeutic adherence, and poor understanding of medical recommendations. This pattern reinforces the importance of health education as a tool to improve prevention and control of the disease. The relationship between education and cardiovascular risk shows that the promotion of healthy lifestyles must be adapted to the educational level of the population.⁽¹¹⁾

The evidence that 48,7 % of patients present an evolution ≥ 10 years since diagnosis reflects a significant chronic burden and a cumulative impact on health. This finding coincides with studies conducted in the United States, where it has been documented that up to 75 % of patients experience diagnostic delays of approximately five years, which contributes to poor disease control and progression of cardiovascular complications.⁽¹²⁾ The high proportion of cases with prolonged evolution underlines the need for early detection strategies and continuous follow-up to mitigate risks.

Our results on prolonged evolution find support in the study by Lu et al.,⁽¹³⁾ which demonstrated that delays greater than one year in the diagnosis of hypertension increase cardiovascular risk by 29 %. This finding is consistent with the significant proportion of patients in our sample who remain at high risk for long periods. The evidence suggests that diagnostic delay not only compromises blood pressure control but also favors the appearance of major events, reinforcing the importance of early interventions and public health policies aimed at reducing diagnostic time.

The high prevalence of modifiable factors identified in our sample constitutes clear evidence of the existing opportunities to implement community interventions aimed at the prevention and control of hypertension. This finding coincides with what has been reported in the literature,^(14,15,16) and underlines the relevance of designing programs to promote healthy lifestyles, capable of influencing the reduction of risk behaviors such as sedentary lifestyle, excessive salt consumption, smoking, and alcoholism. At the same time, it reinforces the need to strengthen health education and social participation, so that communities can assume an active role in adopting protective and sustainable practices.⁽¹⁷⁾

The analysis of eating habits reveals that patients with overweight and obesity showed unfavorable dietary patterns, characterized by high consumption of fats and refined cereals. This behavior coincides with international reviews that associate diets high in ultra-processed foods and products rich in simple carbohydrates with increased cardiovascular and metabolic risk. The scientific literature indicates that excessive intake of these foods favors insulin resistance, dyslipidemia, and arterial hypertension, which reinforces the need for nutritional intervention strategies aimed at reducing their consumption in vulnerable populations.^(18,19)

The low intake of fruits and vegetables observed in our sample constitutes a relevant risk factor for the development and progression of arterial hypertension. This finding contrasts with the recommendations of the British Heart Foundation, which promotes a minimum intake of five daily portions as a protective measure against cardiovascular diseases. The low incorporation of these foods limits the supply of fiber, antioxidants, and essential micronutrients, which negatively affects blood pressure control. International evidence confirms that diets poor in fruits and vegetables are associated with higher prevalence of hypertension and worse clinical prognosis.^(20,21)

The direct relationship between eating habits and the nutritional status of OA confirms that diet constitutes a determining factor in the control of arterial hypertension. The unfavorable patterns observed in individuals with overweight and obesity contrast with the benefits of a protective diet in normal-weight individuals, reinforcing the need for specific dietary interventions in OA. Available evidence supports that modification of diet, together with nutritional education programs, can improve blood pressure control and reduce the burden of cardiovascular disease, consolidating itself as a key strategy in community prevention.^(22,23)

CONCLUSIONS

The eating habits of hypertensive older adults treated at the "Dr. León Cuervo Rubio" Clinical-Surgical Teaching Hospital, Pinar del Río, Cuba, constitute a determining factor in the control of the disease. A predominance of unfavorable dietary patterns was evidenced in patients with overweight and obesity, characterized by high intake of fats, refined cereals, and sugars, together with low incorporation of fruits and vegetables, which increases cardiovascular risk. These findings confirm the need to implement specific dietary interventions and community nutritional education programs aimed at improving blood pressure control and reducing the disease burden in this vulnerable population.

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