

Sociodemographic and clinical characteristics of patients with hypertension in a health area of Niquero

Juan Luis Figueredo Tornés^{1*}, Daniel Sánchez De la Torre¹, Jerjes Iván Gutiérrez López¹, Laritza Benítez Téllez², Niover Antonio Hidalgo Benítez¹

1. Ernesto Guevara Teaching Polyclinic, Niquero, Granma, Cuba

2. Raúl Podio Saborit Teaching Polyclinic, Media Luna, Granma, Cuba

*Corresponding author.

Email address: juanluisft1988@gmail.com

Abstract: Introduction: Hypertension is the chronic disease of more morbidity worldwide, which represents a health problem due to its multicausality and consequences. Objective: To describe the main sociodemographic and clinical characteristics of patients with hypertension, belonging to a health area of Niquero. Methods: An observational, descriptive and cross-sectional study of 370 patients with hypertension who belonged to the Family Doctor Office No. 4 of Niquero, Granma province, was carried out from June, 2021 to the same month in 2022. The variables age, sex, color of the skin, classification according to tension figures and evolution were studied, as well as patient state and complications. Results: There was a prevalence of the 40-59 (37.6 %) and 60-79 (36.5 %) age groups, female sex (58.4 %), as well as the mixed race color of the skin (55.9 %). The patients with grade II hypertension in phase 1 (44.3 %) and partially compensated (55.9 %) were the majority. Peripheral arterial disease was the main complication (21.1 %). Conclusions: The description of the sociodemographic and clinical characteristics of patients with hypertension constitutes an element to take into account for the appropriate control of those affected in the health areas.

Key words: arterial pressure; hypertension; peripheral arterial disease; primary health care

1 Introduction

Hypertension (HTN) is a global health problem due to its morbidity, multiple causes, and consequences. In and of itself, it represents a syndrome, a disease, and a risk factor for other conditions, generally of a cardiovascular nature [1,2].

In adults, it is defined as a systolic blood pressure of 140 mmHg or higher and a diastolic blood pressure of 90 mmHg or higher, or both values inclusive [3]. In the early stages, it is generally not diagnosed in a timely manner because symptoms are rarely present. For this reason, it is known as the silent scourge of the 21st century [4].

Approximately 1,280 million adults aged 30 to 79 have hypertension. In 2019, 82.0% of all people with this condition worldwide lived in low- and middle-income regions [5,6]. Statistical models predict that by 2025, the number of people affected will increase to approximately 1,560 million [7].

In fact, among the main causes of the rise in this disease are rapid urbanization and the emergence of so-called "diseases of civilization" (obesity and unhealthy lifestyles). These factors must be taken into account to properly care

for and manage those affected [3].

In Cuba, the prevalence is similar to that in most countries in Latin America and the Caribbean. At the end of 2020, the rate was 230.2 per 1,000 inhabitants. Although morbidity in Granma Province remained below the national average (192.4 per 1,000 inhabitants), it is still a significant figure [8].

Given that in the municipality of Niquero, hypertension is one of the leading chronic diseases affecting the population, it was decided to conduct this study to describe the main sociodemographic and clinical characteristics of patients with hypertension in a health district of Niquero.

2 Methods

An observational, descriptive, cross-sectional study was conducted on patients with hypertension who were registered at Family Medical Clinic (FMC) [4] in the municipality of Niquero, Granma Province, from June 2021 through June 2022. The study population consisted of 370 patients aged 18 years and older.

The inclusion criteria were as follows: patients registered in the health area who agreed to participate in the study and who were physically and mentally capable of doing so. Patients with hypertension who were temporarily in the area during the study period and those residing outside the area were excluded. Withdrawal from the study and death were considered exclusion criteria.

The variables analyzed were sociodemographic (age, sex, and skin color) and clinical (classification based on blood pressure readings and progression, patient status, and complications).

The following grades were used in the classification based on blood pressure readings:

- a. Grade I: systolic blood pressure of 140–159 and diastolic blood pressure of 90–99.
- b. Grade II: systolic blood pressure of 160–179 and diastolic blood pressure of 100–109.
- c. Grade III: systolic blood pressure of 180 or higher, as well as diastolic blood pressure of 120 or higher.

To classify the progression of the condition, three stages were considered:

- a. Phase 1: Hypertension without symptoms or signs of organ damage.
- b. Phase 2: Hypertension with left ventricular hypertrophy, arteriolar narrowing in the fundus, proteinuria (microalbuminuria), or a mild increase in plasma creatinine—either individually or in combination.
- c. Phase 3: Hypertension with target organ damage (heart, kidney, brain, large arteries), in which organ damage may manifest as myocardial infarction, cerebrovascular disease, occlusive arterial disease, aortic dissection, or renal failure.

The following categories are based on the patient's status:

- a. Controlled: If all blood pressure (BP) measurements over the course of one year (at least 4 readings) were below 140/90 mmHg or within the target range for the patient's risk group.
- b. Partially controlled: If, over the course of one year, 60% or more of the BP measurements were below 140/90 mmHg.
- c. Uncontrolled: When, over the course of one year, less than 60% of BP readings were below or above 140/90 mmHg, as appropriate for the patient's risk group.

The complications considered were peripheral arterial disease, hypertensive retinopathy, left ventricular hypertrophy, heart failure, ischemic heart disease, cerebrovascular disease, and chronic kidney disease.

To assess each patient's clinical course and the aforementioned complications, a thorough physical examination was performed, with particular emphasis on blood pressure measurement and fundus examination. Laboratory tests were also conducted, including creatinine, microalbuminuria, glomerular filtration rate, electrocardiogram, and posteroanterior chest

X-ray at a distance from the electrocardiogram.

The information was obtained through a review of individual medical records and family health records available at the FMC. In addition, the authors developed a data collection form.

The principles of ethics in research involving human subjects were observed. Informed consent was obtained from each participant. The study was approved by the Research Ethics Committee and the Municipal Scientific Health Council.

3 Results

Table 1 shows a predominance of the 40–59 (37.6%) and 60–79 (36.5%) age groups. Female participants were the most common (58.4%).

Table 1. Patients by age and sex

Age (years)	Male		Female		Total	
	No.	%	No.	%	No.	%
Under 20	3	0.8	1	0.3	4	1.1
20–39	38	10.3	21	5.7	59	15.9
40–59	42	11.4	97	26.2	139	37.6
60–79	57	15.4	78	21.1	135	36.5
80 and above	14	3.8	19	5.1	33	8.9
Total	154	41.6	216	58.4	370	100

When analyzing skin color (Table 2), it was found that mixed-race patients were the most common (207, or 55.9%), while white patients were less represented (72, or 19.5%).

Table 2. Patients by skin color

Skin Color	No.	%
Mixed-race (Mestizo)	207	55.9
Black	91	24.6
White	72	19.5
Total	370	100

In the case series (Table 3), patients with stage II and phase I hypertension were the most common (164, or 44.3%); however, no patients were found with stage I or phase III hypertension.

Table 3. Patients by blood pressure readings and course of the disease

Grades	Evolution						Total	
	Phase 1		Phase 2		Phase 3			
	No.	%	No.	%	No.	%	No.	%
I	102	27.6	7	1.9			109	29.5
II	164	44.3	22	5.9	7	1.9	193	52.1
III	15	4.1	34	9.2	19	5.1	68	18.4
Total	281	75.9	63	17	26	7	370	100

Table 4 shows a prevalence of partially controlled patients (55.9%) and a minority of uncontrolled patients (16.8%).

Table 4. Patient status

Patient Status	No.	%
Partially controlled	207	55.9
Controlled	101	27.3
Uncontrolled	62	16.8
Total	370	100

When evaluating complications (Table 5), peripheral arterial disease was found to be the most common, with 78 cases (21.1%), followed by fundus lesions (57 cases, 15.4%) and left ventricular hypertrophy (53 cases, 14.3%). Chronic kidney disease was the least common, affecting 11 patients (2.9%).

Table 5. Patients by complications

Complications	No.	%
Peripheral arterial disease	78	21.1
Hypertensive retinopathy	57	15.4
Left ventricular hypertrophy	53	14.3
Heart failure	38	10.3
Ischemic heart disease	27	7.3
Cerebrovascular disease	21	5.7
Chronic kidney disease	11	2.9

4 Discussion

The predominance of patients aged 40–59 and of female patients is consistent with what is described in the current literature on the subject. Such is the case in a study [3] conducted at the Aleida Fernández Chardiet Polyclinic in Havana, in which 48.7% of the patients were in the aforementioned age group and 58.03% were female.

Similarly, another study [2] conducted in a health area of the 4 de Abril Teaching Polyclinic in Guantánamo reported a predominance of that same age group and among females, at 58.89% and 63.01%, respectively. There is also consistency with the results of a descriptive study [9], conducted at the 17-4 medical clinic, located in the health area of the Chiqui Gómez Lubian Polyclinic in the municipality of Santa Clara, during 2021, in which the 40–59 age group accounted for 48.7% and females for 58.0% of the study's participants.

In contrast, at the Huambo General Hospital in the city of Angola, [10], 52.57% of patients with hypertension admitted to the Internal Medicine Department of that institution were 60 years of age or older, and 70.91% were male. The authors of this study believe that the morbidity associated with hypertension increases with age; hence the predominance of the 40–59 age group, compounded by unhealthy lifestyles and the prolonged presence of risk factors that trigger the disease. Regarding gender, the higher prevalence among women may be due to sociocultural factors related to risk perception. Furthermore, in the study area in question, women more frequently seek care from the family physician-nurse team, which allows for a more accurate diagnosis.

Skin color is another factor to consider among those affected by hypertension. In this regard, the results of the present study show similarities with a study [11] conducted in the Chambo-Riobamba Health District of Ecuador, where mixed-race patients were predominant (76.07%).

At one of the isolation centers of the University of Medical Sciences in Cienfuegos, the characteristics of patients with

hypertension were studied; of these, 86.9% were white, although mestizos were not included as an option [1]. In contrast, in a study conducted in Clinic 7 of the Aleida Fernández Chardiet Polyclinic in Havana in 2017, the majority of the subjects were (36.8%) [3]. Similarly, Guillén et al.[9] report a predominance of black skin color (36.8%) in Clinic 17-4 in Santa Clara.

We agree with the view of other researchers [12], who suggest that mixed-race skin color plays an important role in the development and manifestation of this disease, due to greater vascular hyperactivity and sensitivity to salt, as well as reduced sodium-potassium pump activity. The authors of this series add that this ethnic category is predominant in the population of the municipality of Niquero.

However, regarding the classification of patients based on blood pressure readings and clinical course, no studies were found that took both variables into account, which prevented comparisons with other specific periods. Nevertheless, in a study [13] conducted at Clinic 14 of the Ángel Machaco Ameijeiras Polyclinic in Guanabacoa, Havana, 67.46% of the subjects had stage I hypertension. The same result was obtained at the José Martí Pérez Polyclinic in Santiago de Cuba, in 60.2% of the patients [14].

It is important to note that the predominance of individuals with stage II and phase 1 hypertension—even though most of them have had this condition for several years—may be due to adherence to the measures included in the disease management program, particularly those based on health education regarding modifiable causal and progression factors, which have minimized the onset and development of lesions in target organs.

With regard to the patients' condition, the results contrast with those reported by Rivera et al.[3], who found that 55.4% of the subjects in their series were well-controlled.

In this study, the predominance of partially controlled patients may be due to inadequate treatment adherence, attributable to low coverage of antihypertensive medications in the pharmacy network.

For their part, Bebert et al.[10] found similar results regarding complications, as they identified left ventricular hypertrophy and hypertensive retinopathy as the most common, at 60.42% and 17.71%, respectively. Hypertensive kidney disease was the least common, affecting only 3.0% of the study participants.

Among patients with hypertension treated at the EsSalud II-2 Tarapoto Hospital in Peru, renal failure was the most common complication, occurring in 27.0% of them [15]. Ventricular hypertrophy and hypertensive retinopathy were not present in that cohort. Meanwhile, García et al.[16] found that cerebrovascular complications were the most common (41.5%) among patients who presented with a hypertensive crisis at the Emergency Department of the Dra. Francisca Rivero Arocha Polyclinic in Manzanillo, Granma, from January through December 2020.

Peripheral arterial disease is the most common complication. This may be because it is a direct consequence of hypertension as a risk factor, combined with other contributing factors such as smoking and elevated cholesterol levels.

In conclusion, the description of the sociodemographic and clinical characteristics of patients with hypertension is an important factor to consider for the proper management of this disease in healthcare settings.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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