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EVALUATION OF EPIDEMIOLOGIC HIPERTENSIVE REGISTERED IN A BASIC HEALTH UNIT

AVALIAÇÃO EPIDEMIOLÓGICA DOS HIPERTENSOS CADASTRADOS EM UMA UNIDADE BÁSICA DE SAÚDE

EVALUACIÓN EPIDEMIOLÓGICA DE LOS HIPERTENSOS REGISTRADOS EN UNA UNIDAD BÁSICA DE SALUD

Patrick Leonardo Nogueira da Silva¹, Gleidson de Freitas Rodrigues², Gleison de Freitas Rodrigues³, Écila Campos Mota⁴, Simone Guimarães Teixeira Souto⁵, Renata Patrícia Fonseca Gonçalves⁶

ABSTRACT

Objective: investigating the epidemiological profile of hypertensive patients enrolled in a Health Unit. **Method:** a descriptive, documentary, exploratory and quantitative study, with 284 hypertensive patients. The data were collected with a semi-structured form, typed in the SPSS version 18.0 and, later, conducted the descriptive analysis. The project was approved by the Ethics Research Committee, CAAE: 17094413.5.0000.5109. **Results:** the majority of the sample was female, aged between 50-55 years old, brown and residents of rural areas. Among the changes in body mass, prevailed obesity level I (22,5%). As for pressure values there is a predominance of normality values (40,1%). The prevalent risk factors were the family history followed by obesity / overweight. **Conclusion:** Health Unit should continue empowering users to improving the modifiable risk factors those aggravate the tension frame. **Descriptors:** Hypertension; Body Mass Index; Risk Factors; Complications; Descriptive Epidemiology; Health Centers.

RESUMO

Objetivo: investigar o perfil epidemiológico dos hipertensos cadastrados em uma Unidade de Saúde. **Método:** estudo descritivo, documental, exploratório e quantitativo, com 284 hipertensos. Os dados foram coletados com um formulário semiestruturado, digitados no SPSS versão 18.0 e, posteriormente, realizada a análise descritiva. O projeto foi aprovado pelo Comitê de Ética em Pesquisa, CAAE: 17094413.5.0000.5109. **Resultados:** a maior parte da amostra era do sexo feminino, com faixa etária entre 50-55 anos, pardos e residentes na zona rural. Dentre as alterações da massa corporal, predominou-se a obesidade grau I (22,5%). Quanto aos valores pressóricos há predominância dos valores de normalidade (40,1%). Os fatores de risco prevalentes foram os antecedentes familiares seguidos da obesidade/sobrepeso. **Conclusão:** a Unidade de Saúde deve continuar capacitando os usuários a fim de melhorar os fatores de risco modificáveis que agravam o quadro hipertensivo. **Descritores:** Hipertensão; Índice de Massa Corporal; Fatores de Risco; Complicações; Epidemiologia Descritiva; Centros de Saúde.

RESUMEN

Objetivo: investigar el perfil epidemiológico de los pacientes hipertensos inscritos en una Unidad de Salud. **Método:** un estudio documental, descriptivo, exploratorio, cuantitativo realizado con 284 hipertensos. Los datos fueron recogidos con una forma semi-estructurada, escrita en el SPSS versión 18.0 y posteriormente llevó a cabo el análisis descriptivo. El proyecto fue aprobado por el Comité de Ética en Investigación, CAAE: 17094413.5.0000.5109. **Resultados:** la mayoría de la muestra fueron mujeres, con edades comprendidas entre 50 a 55 años, de color pardo y los residentes de las zonas rurales. Entre los cambios en la masa corporal, prevaleció la obesidad de la clase I (22,5%). En cuanto a los valores de presión hay un predominio de los valores normales (40,1%). Los factores de riesgo predominantes fueron la historia familiar seguida de la obesidad / sobrepeso. **Conclusión:** la Unidad de Salud debe continuar a empoderar a los usuarios para mejorar sus factores de riesgo modificables que agravan el marco hipertensivo. **Descriptor:** Hipertensión; Índice de Masa Corporal; Factores de Riesgo; Complicaciones; Epidemiología Descriptiva; Centros de Salud.

¹Nurse, Specialist in Family Health, State University of Montes Claros/Unimontes. Montes Claros (MG), Brazil. Email: patrick_moces70@hotmail.com; ²Nurse from the Integrated Colleges Pitagoras of Montes Claros/FIP-MOC. Montes Claros (MG), Brazil. Email: g.freitasrodrigues@hotmail.com; ³Nurse from the Integrated Colleges Pitagoras of Montes Claros/FIP-MOC. Montes Claros (MG), Brazil. Email: gleison68@hotmail.com; ⁴Nurse, Master Teacher of Nursing, Nursing Department, State University of Montes Claros/Unimontes/Integrated Colleges Pitagoras of Montes Claros/FIP-MOC. Montes Claros (MG), Brazil. Email: ecilacampos@hotmail.com; ⁵Nurse, Master Teacher of Nursing, Department of Nursing, State University of Montes Claros/Unimontes. Montes Claros (MG), Brazil. Email: simonegts28@yahoo.com.br; ⁶Nurse, Master Teacher of Nursing, Nursing Course Coordinator, State University of Montes Claros/Unimontes. Montes Claros (MG), Brazil. Email: renatapfonseca@yahoo.com

INTRODUCTION

The Systemic Arterial Hypertension (HBP) is a chronic, non-transferable, asymptomatic, multifactorial disease that impairs the vasodilator and vasoconstrictor mechanisms in the body.¹ It is the most common cardiovascular disease, and the most common cause of morbidity in the adult population and more common in emergency services in Brazil. It is also the main risk factor for common complications, such as stroke and myocardial infarction, in addition to chronic renal disease.¹

The health situation in Brazil and Minas Gerais is determined by some important factors, among which stands out the transition from Brazilian epidemiological context. In 1930, infectious diseases accounted for 46% of deaths, and, in 2003, it accounted for only 5% of mortality, leading to cardiovascular diseases, cancer and accidents and violence.²

By the year 2020, chronic conditions are responsible for 60% of the global burden of disease in developing countries.² In the whole country there are about 17 million people with hypertension, being 35% of the population 40 or older. This number is increasing; its appearance is getting earlier and it is estimated that about 4% of children and adolescents are also suffering from hypertension. The burden of disease represented by the morbidity and mortality due to the disease is very high and all that SAH is a serious public health problem in Brazil and worldwide.¹

Because it is an asymptomatic disease, its diagnosis and treatment are often overlooked. In addition, poor adherence by the patient to the prescribed treatment hinders the maintenance of proper pressure levels.³ These are the main factors those determine a low control of hypertension to normal levels around the world, notwithstanding the various protocols and recommendations and greater access to existing medicines.¹

The food, especially regarding salt intake, weight, physical activity level, smoking and excessive alcohol use are risk factors that must be properly addressed and controlled.⁴ Changes in lifestyle are essential in the prevention of hypertension in the therapeutic process. Without these changes in daily hypertensive individual, even progressive doses of medicines do not achieve the recommended blood pressure levels.¹

Health professionals of the basic health network have prime importance in strategies of hypertension control, both in establishing

the clinical diagnosis and the therapeutic management, as required in efforts to informing and educating the hypertensive patient, beyond making him following the treatment.¹⁻⁴

Primary Care, notably the Family Health Strategy, is constituted of a privileged and priority space of health attention acting with a multidisciplinary team that works with and whose work process presupposes a bond with the community and enrolled customers, taking into account racial, cultural, religious and social factors involved. Being a major contributor to the early detection of population groups at risk.⁵

Recognizing the distribution of risk factors for hypertension in populations is essential for screening, prevention and control of hypertension; mainly considered the social aspects involved in health and disease processes. Given the above, came the research problem: What is the epidemiological profile of hypertensive patients by FHS Santa Teresa of the municipality of Espinosa / Minas Gerais for the period 2012? Therefore, the study aims at investigating the epidemiological profile of hypertensive patients inscribed in a Health Unit.

METHOD

This is a documentary, descriptive study, with a quantitative approach, of exploratory character; conducted at a Family Health Strategy (FHS) located in Santa Teresa neighborhood in the city of Espinosa / MG.

The municipality of Espinosa is a small town located in the extreme north of Minas Gerais bordering the State of Bahia. The same has 11 Family Health Strategies in which they present in each health facility, multidisciplinary teams that meet 100% of the county population coverage to cover urban areas and mainly rural areas.

In this study we sought to study the hypertensive patients of one of the FHSs of this township registered in 2012, being the same the FHS Santa Tereza. The same attends eight micro areas, and of these, being seven micro rural areas and only one urban micro-area.

For this study, the following inclusion criteria were adopted: be registered as hypertensive in the FHS Santa Tereza; and having the HIPERDIA record completed in 2012. And, as exclusion criteria, HIPERDIA chips not containing data filled correctly.

The study sample consisted of all patients enrolled in the HIPERDIA of the FHS Santa Tereza in 2012, becoming 284 patients.

The data collection was performed from the records of hypertensive clients who were enrolled in the Family Health Strategy. These data were collected by the researchers responsible in the own FHS in the 2nd half of 2013. The data were collected on a form that contains the same data presented in the HIPERDIA record.

The Body Mass Index is a variable of the research in which is calculated through a mathematical formula featuring two anthropometric measures, with the same weight and height. This mathematical formula may be represented as follows: $BMI = \frac{Weight}{(Height)^2}$

According to the Ministry of Health, the BMI is evaluated according to the following classification: Very Low Birth Weight (less than 16); Low weight (between 16 and 18,49); Normal weight (between 18,5 and 24,9); Overweight (greater than or equal to 25); Obesity class I (between 25 and 29,9); Obesity class II (between 30 and 39,9); Obesity class III (equal to or greater than 40).

The pressure values are also part of the other variables in this study, may, as BMI, as their values be sorted. These are: Normal

(120x80 the 130x85 mmHg); Borderline (130x85 the 139x89 mmHg); SAH level I (140x90 the 159x99 mmHg); SAH level II (160x100 to 179x109 mmHg); and Hypertension level III (above 180x110 mmHg).

Upon completion of the collection, the data were tabulated and then the descriptive analysis with frequency distribution and percentage was performed.

The research ensured the compliance of the ethical principles set out by the National Health Council (CNS), by Resolution 196/96 for conducting research with humans. It was sent to the Ethics Committee in Research of Integrated Colleges Pitagoras of Montes Claros (CEP FIP-Moc), under opinion No. 291.324/2013, CAAE: 17094413.5.0000.5109.

RESULTS

Table 1 shows that most of the patients enrolled were female; presented range in age between 50-59 years old, with a total average age of 55,714 years old; with only elementary education incomplete. Other patients could not read and write. Regarding the color / race, most were brown; regarding location, most of the patients live in rural areas.

Table 1. Socio-demographic profile of hypertensive patients registered at the FHS Santa Tereza of the municipality of Espinosa, in the period of 2012. Espinosa, Minas Gerais, 2013.

Variables	Cases diagnosed and registered		MTC ^(*)		
	n=284	%	MAP ⁽¹⁾	Me ⁽²⁾	DP ⁽³⁾
Gender					
Male	106	37,3	-	-	-
Female	178	62,7	-	-	-
Age					
< 30 years old	01	0,3	29	29	00
30-39	13	4,5	35,76	37	2,390
40-49	29	10,2	44,93	45	2,211
50-59	75	26,4	55,08	55	2,307
60-69	69	24,2	65,82	65	1,483
70-79	66	23,2	75,37	75	1,807
Older than 80	31	11,2	85,16	84	3,163
Schooling					
Cannot read/write	105	36,9	-	-	-
Literate	10	3,5	-	-	-
Basic incomplete	152	53,5	-	-	-
Basic complete	12	4,2	-	-	-
Secondary incomplete	01	0,3	-	-	-
Secondary complete	03	1,3	-	-	-
Higher education incomplete	00	00	-	-	-
Higher education complete	01	0,3	-	-	-
Color/Race					
White	07	2,4	-	-	-
Black	60	21,1	-	-	-
Yellow	03	1,2	-	-	-
Brown	208	73,2	-	-	-
Indigenous	00	00	-	-	-
Not reported	06	2,1	-	-	-
Place					
Urban	41	14,5	-	-	-
Rural	243	85,5	-	-	-

Source: Registration sheets of hypertensive and diabetic patients (HIPERDIA) of the FHS Santa Tereza. Espinosa (MG), 2013.
(*)MTC - Measures of Central Tendency; ⁽¹⁾MAP - Weighted Arithmetic Average; ⁽²⁾Me - Median; ⁽³⁾DP - Standard Deviation.

The body mass index (BMI) is a variable obtained through two anthropometric data, with the same weight and height. According

to data in Table 2, the majority of the population falls within the normal limits for BMI. However, the changes detected in level I

obesity was the most prevalent. In relation to blood pressure values, much of the population studied had rates of regular blood pressure, ie, within normal standards. Those with

abnormal blood pressure, borderline patients prevailed followed by patients with hypertension level 1.

Table 2. Body Mass Index and blood pressure values of hypertensive registered at the FHS of the municipality of Espinosa, in the period of 2012. Espinosa, Minas Gerais, 2013.

Variables	Cases diagnosed and registered	
	n=284	%
BMI		
Very Low Weight	03	1,3
Low Weight	09	3,1
Normal Weight	135	47,5
Overweight	35	12,3
Obesity level I	64	22,5
Obesity level II	27	9,5
Obesity level III	11	3,8
Total	284	100
Pressure values		
Normal	114	40,1
Borderline	81	28,5
Hypertension level I	64	22,5
Hypertension level II	16	5,6
Hypertension level III	09	3,3
Total	284	100

Source: Registration sheets of hypertensive and diabetic patients (HIPERDIA) of the FHS Santa Tereza. Espinosa (MG), 2013.

In the case of Table 3, it exposes the numerical values and percentages of prevalence of risk factors and the most commonly reported complications in hypertensive patients in the town of Espinosa / MG, during 2011.

Risk factors are factors those predispose the development of other diseases, including hypertension, the patients studied. Thus, the same patient may go on to develop more than one risk factor (multifactor patient) or come not to develop any risk factor.

Within this analysis, the most prevalent risk factor was family history, also called hereditary and genetic factors followed by obesity / overweight. Other risk factors were

observed in lower prevalence, such as the presence of Type 1 Diabetes Mellitus, sedentary lifestyle, smoking and Type 2 Diabetes Mellitus.

Regarding complications arising from hypertension, almost every portion of the sample did not develop any of the factors. For the patients who developed a complication, only one had Acute Myocardial Infarction; Other diseases, such as atherosclerosis; and kidney disease.

Table 3. Risk factors and complications presented by hypertensive patients registered at the FHS of the municipality of Espinosa, in the period of 2012. Espinosa, Minas Gerais, 2013.

Variables	Cases diagnosed and registered	
	n	%
Risk factors		
Obesity/Overweight	138	34,3
Sedentary Lifestyle	12	2,9
Smoking	04	0,9
Diabetes Mellitus Type 1	15	3,7
Diabetes Mellitus Type 2	04	0,9
Family history	229	57,3
Total	402	100
Complications		
Acute myocardial infarction	01	0,3
Other Heart Diseases	01	0,3
Kidney disease	01	0,3
There are no complications	281	99,1
Total	284	100

Source: Registration sheets of hypertensive and diabetic patients (HIPERDIA) of the FHS of Santa Tereza. Espinosa (MG), 2013.

In terms of drug therapy or pharmacotherapy adopted by hypertensive patients after diagnosis, the following Table 4 shows that the most commonly used therapy are drugs with diuretic function, having as the main drugs hydrochlorothiazide or furosemide

or lasix and chlorana. Some patients use these medications in the form of associations. The collaborative scheme are more accomplished diuretics + beta-blockers, diuretics + followed by angiotensin-converting enzyme (ACE) inhibitors.

Table 4. Pharmacotherapeutic schema of hypertensive patients registered at the FHS of the municipality of Espinosa in the period of 2012. Espinosa, Minas Gerais, 2013.

Variables	Cases diagnosed and registered	
	n=284	%
Pharmacotherapeutic Schema		
Diuretic	88	30,9
B-Blocker	54	19,0
ACE INHIBITORS	45	15,8
Diuretic + B-Blocker	46	16,1
Diuretic + ACE INHIBITORS	36	12,6
B-Blocker + ACE INHIBITORS	05	1,7
Diuretic + B-Blocker + ACE INHIBITORS	06	2,1
Non-Pharmacological Treatment	04	1,8
Total	284	100

Source: Registration sheets of hypertensive and diabetic patients (HIPERDIA) of the FHS of Santa Tereza. Espinosa (MG), 2013.

DISCUSSION

Hypertension is a major risk factor for cardiovascular disease, with high morbidity and mortality, especially in the age group 30-69 years old.⁶ Of the 43 million hypertensive existing in the country, about 30% are adults, 50% are over 50 years old and 60% are over 60.⁷ Whereas in 2025 there will be over 35 million elderly people in the country, the number of patients with hypertension tends to grow.⁸ The average age of hypertensive population surveyed is 60.⁴ It is estimated that at least 65% of the Brazilian elderly are hypertensive. Most have isolated or predominant elevation of systolic pressure,

increasing pulse pressure, which shows strong correlation with cardiovascular events.¹

After analyzing the data collected in this study and research at the national level, it can be seen that the prevalence of hypertension is high and increases with age.^{1,12} In blacks, the prevalence and severity of hypertension are higher, which may be related to ethnic and / or socioeconomic factors. In our country the mongrels, which may differ from blacks on the characteristics of hypertension predominate. The majority of treatment of hypertensive patients in outpatient clinics and emergency rooms are non-white individuals.⁹

In other studies surveyed there were described similar results, in which the female population is most affected by hypertension.^{4,10} Yet on the gender, among people of middle age, men are more prone to hypertension. However, after age 55 (when most women have reached menopause), the relationship is reversed and the disease becomes dominant among females.⁷ The Brazilian Society of Cardiology corroborates previous exposure to cite global estimates suggest that higher rates of hypertension for men up to 50 years old and for women from the sixth decade.¹¹

Excess body weight is a predisposing factor for hypertension, being responsible for 20% to 30% of cases. Observational studies have shown that weight gain and increased waist circumference are important prognostic indices of disease, central obesity being an important indicator of increased cardiovascular risk.¹¹ In another study it was concluded that in hypertensive individuals elevated blood pressure values was observed systolic with increased BMI, reaching a statistically significant difference between the groups with overweight and obesity.¹²

The greater the accumulation of adipose tissue, higher body mass and higher heart rate and work the heart must perform to carry blood to tissues.⁷ Furthermore, the higher prevalence of hypertension in obesity can be attributed to hyperinsulinemia due to resistance to present in obese individuals, particularly those with excess fat in the trunk region insulin. Hyperinsulinemia promotes activation of the sympathetic nervous system and tubular reabsorption of sodium, which contributes to increased peripheral vascular resistance and blood pressure.¹²

Antihypertensive treatment has as main objective to reduce cardiovascular morbidity and mortality. Despite the effectiveness of treatment, blood pressure is poorly controlled.¹⁰ In the United States, between 1999 and 2000, 53% of hypertensive patients were under treatment and only 31% had controlled blood pressure.¹³

As for the non-medication treatment, we must consider some essential factors in hypertension control, namely weight control; style food, including mainly the reduction of salt intake; the practice of regular physical activity; decreased intake of alcohol and tobacco consumption; and stress management.¹⁴ Successful treatment depends mainly on behavioral change and adherence to a healthy eating plan as well as the support of a multidisciplinary team during the monitoring of blood pressure control.¹⁵

With regard to risk factors, hypertensive individuals often have high cholesterol levels, obesity, elevated heart rate, hypertriglyceridemia and diabetes mellitus, with only 13% of men and 20% of women present with hypertension alone. In the Framingham study, among individuals with hypertension, cardiovascular events occurred more frequently in the presence of at least two risk factors, demonstrating that the risk of events is proportional to the association of risk factors.¹⁶

When analyzing the association between risk factors and concomitant diseases was possible to verify that the family history, diabetes mellitus type II, physical inactivity and overweight / obesity was significantly associated with SH.¹⁷ Hypertension is one of the most prevalent risk factors for the development of coronary artery disease, stroke, peripheral, renal failure and congestive heart failure, vascular disease.¹⁸ The burden imposed on the heart by hypertension may trigger different mechanisms of compensation; among them, there is left ventricular hypertrophy (LVH). The maintenance of overload and consequent progression of LVH culminate with degeneration of cardiac function and the development of heart failure and its complications.¹⁹

The primary goal of treating hypertension is to reduce cardiovascular morbidity and mortality. Thus, the antihypertensive should not only lower blood pressure but also fatal cardiovascular events and non-fatal.¹¹ The decision on the treatment of hypertensive patients should not be based solely on the level of BP, but also in the presence of other factors risk, the involvement of target organs and the presence of associated diseases.²⁰ Pharmacological treatment should be instituted immediately in cases of patients in risk group "C", which have target organ damage or cardiovascular disease clinically identifiable and / or diabetes mellitus. Or after treatment failure non-pharmacologic risk groups "A" and "B".¹³

With regard to drugs by physicians, chosen for the initial treatment of mild hypertensives, diuretics were the drugs most commonly cited in the first choice (38%) followed by ACE inhibitors, beta blockers and calcium.¹³ In a survey conducted in the city of São Paulo (SP), the major classes of antihypertensive drugs consumed by adults was ACEI (25,3%), diuretics (32,3%), beta-blockers (17,1%), and combination of drugs (36,14%).²¹ In a study it was revealed a total of 34,8% hypertensive patients using

monotherapy with ACE inhibitors, 26% use diuretics, 20,5% beta-blockers and 14,7% using drug combinations.⁴

Planning actions and schedule them next to the user is an important strategy in the therapeutic process because it facilitates the incentive to changes in lifestyle. The main duties of nurses in care for patients with hypertension, there is participation in this professional educational groups formed by health facilities, as well as conduct guidelines and recommendations for the treatment and self-care during the nursing consultation, they are also discussed in meetings with educational groups, where the nurse along with the remaining team, pass on information for self-care to hypertensive patients, enabling them to participate in support groups in the community helping with emotional issues and encouraging healthy lifestyles.²²

CONCLUSION

Hypertension remains one of the major morbidities, being a risk factor for cardiovascular diseases, the leading cause of death in adults in our country. Even with so many technological and scientific advances, very little has been achieved in its control or resolving and comprehensive public policies, the expected impact in terms of survival and quality of life for this population. The regional diversity of the country in age, race, education and even access to health services, that influence diagnosis and treatment difficult decision making in the health sector and consequently the effective approach to the problem.

Hypertension was more prevalent in women, in people aged 60-69 years old, most with low level of education, brown, and most of the resident population of the countryside. The population is stable in terms of risk factors for acquiring cardiovascular diseases, but there is a significant rate and the body weight changes which influence the increase in hypertension. Advanced age favors comorbidities for the emergence or worsening of the disease in question. Of the sample, only a small portion controls blood pressure with changes in life habits, so much is still prey to anti-hypertensive drugs. Therefore, knowledge of the epidemiology of hypertension enables the adoption of health policies more compatible with the reality of the population, in order to guide actions for health promotion, prevention, early diagnosis and treatment of hypertensive patients, thus establishing a most appropriate form of intervention.

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Corresponding Address

Patrick Leonardo Nogueira da Silva
Avenida Doutor Sidney Chaves, 1171 / Ap. 102
/ Bloco H
Bairro Edgar Pereira
CEP 39400-648 — Montes Claros (MG), Brazil