Systemic arterial hypertension: characterization of pathology prevalence in a health unit in Sao Luis/MA/Brazil

Hipertensão arterial sistêmica: caracterização da prevalência da patologia em uma unidade de saúde de São Luís/MA/Brasil

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ABSTRACT
More than 70% of annual deaths in the world are occasional due to chronic non-communicable diseases, with emphasis on pathologies resulting from systemic arterial hypertension, which affect the cardiovascular system. Males constitute the population with the highest rates of morbidity and generally do not have the habit of seeking health care for preventive and self-care measures. The objective of this study was to analyze the epidemiological profile of men diagnosed with systemic arterial hypertension in Sao Luis - MA, from 2018 to 2022. This is a descriptive, retrospective epidemiological study, with a quantitative approach to the incidence of systemic arterial hypertension, with analysis documentation of 147 men diagnosed with SAH in the described period. The variables used were age group, obesity, smoking, sedentary lifestyle, medication use, skin color and marital status. The results obtained show the highest number of cases of SAH according to the profile of patients aged between 30 and 69 years, obese, non-smokers, sedentary, using medication and living with a partner. The study made it possible to discover new ways of addressing the health demands imposed by the destructive processes and male needs, highlighting the need for early diagnosis and treatment and the
implementation of the principles of integrity and equality of the SUS. This research characterized specific groups and identified their health needs to facilitate interventions that provide effective results.

**Keywords:** hypertension, men, Sao Luis, Maranhao.

**RESUMO**
Mais de 70% dos óbitos anuais no mundo são ocasionais por doenças crônicas não transmissíveis, destacando-se as patologias decorrentes da hipertensão arterial sistêmica, que acometem o sistema cardiovascular. O sexo masculino constitui a população com maiores taxas de morbimortalidade e geralmente não tem o hábito de procurar atendimento de saúde para medidas preventivas e de autocuidado. O objetivo deste estudo foi analisar o perfil epidemiológico de homens diagnosticados com hipertensão arterial sistêmica em São Luís - MA, de 2018 a 2022. Trata-se de um estudo epidemiológico descritivo, retrospectivo, com abordagem quantitativa da incidência de hipertensão arterial sistêmica, com análise documental de 147 homens diagnosticados com HAS no período descrito. As variáveis utilizadas foram faixa etária, obesidade, tabagismo, sedentarismo, uso de medicações, cor da pele e estado civil. Os resultados obtidos mostram o maior número de casos de HAS de acordo com o perfil de pacientes com idade entre 30 e 69 anos, obesos, não tabagistas, sedentários, em uso de medicação e vivendo com companheira (o). O estudo permitiu descobrir novas formas de abordar as demandas de saúde impostas pelos processos destrutivos e as necessidades masculinas, destaca a necessidade de diagnóstico e tratamento precoces e a implementação dos princípios de integridade e igualdade do SUS. Esta pesquisa caracterizou grupos específicos e identificou suas necessidades de saúde para facilitar intervenções que proporcionem resultados eficazes.

**Palavras-chave:** hipertensão, homens, São Luís, Maranhão.

**1 INTRODUCTION**
Throughout history, the representation of the male role has always followed the model of total masculinity, in which he must always present himself as strong and invincible (OLIVEIRA et al., 2017). It was only after the 1980s that interventions aimed at men's health began to expand in Brazil (Brito & Santos, 2018), and it was only in the 2000s that the World Health Organization (WHO) launched publications focused on the health of this particular part of society.

In 2009, the Ministry of Health launched the National Policy for Integral Attention to Men's Health (PNAISH) to improve the health status of the Brazilian male population and effectively reduce morbidity, aiming at the rational search for risk factors and the promotion of interventions and comprehensive health services, to reduce the mortality of this population (MOURA et al., 2014).

Differences in morbidity between men and women are well known throughout the history of society. Men are more likely to die prematurely, perhaps because they engage in risky
behavior more often, are more susceptible to cardiovascular disease, and receive less medical care due to lack of health services. Due to lack of time, they claim false self-perceptions of their own physical and mental infallibility (MOURA, 2012).

Obesity, alcoholism and smoking are the problems that most affect men's health today. These problems are considered preventable, but end up making people more susceptible to diseases and non-communicable chronic diseases (MINISTÉRIO DA SAÚDE, 2016).

Chronic noncommunicable diseases (NCDs) accounted for 71% of the 57 million deaths worldwide in 2016 (WHO, 2018a, 2018b). In Brazil, in the same year, CNCDs were also associated, accounting for 74% of all deaths, with emphasis on cardiovascular diseases, neoplasms, respiratory diseases and diabetes (WHO, 2018c, MS, 2016).

Between 2015 and 2020, 45,809 people aged 30 to 69 died in Maranhão from cardiovascular diseases, cancer, chronic respiratory diseases and diabetes. Factors such as inadequate nutrition, lack of physical activity, excessive alcohol consumption and smoking are behaviors that increase the risk of CNCD. Notably, cardiovascular disease (CAD) is the leading cause of death in NCDs (134.3 per 100,000 population) in 2020, followed by mortality from diabetes (41.2 per 100,000 population) (CONECTA SUS/SIM/SES/Massachusetts, 2021).

Cardiovascular disease (CVD) and diabetes are some of the most common chronic diseases worldwide. It is estimated that 1.4 billion people worldwide suffer from hypertension, but only 14% have it under control (HYPERTENSION, 2019). Despite a sharp decline in cardiovascular disease in developed countries over the last few decades, largely due to improvements in primary and secondary prevention, cardiovascular disease remains prevalent and a leading cause of death worldwide.

The WHO epidemiological study also showed that men are less likely than women to be treated for hypertension, increasing the need to focus on this group from the point of view of public diagnostic and treatment policies (CARDIOVASCULAR DISEASES, 2017).

The development of hypertension is often accompanied by the development of diabetes. Hypertensive individuals generally have insulin resistance and are at greater risk of developing diabetes than normotensive individuals. Also, people with diabetes are twice as likely to have high blood pressure as those without diabetes. Thus, the coexistence of both clinical entities contributes considerably to the increase in cardiovascular mortality (PETRIE et al., 2018).

When men and women have similar illnesses, men have a worse prognosis. According to the 2018 Pan American Health Organization, 30-year-olds are 44% more likely than women to die from noncommunicable diseases before age 70. Oliveira et al., 2017 observed a higher
incidence of preventable death in men, highlighting the importance of investing in health promotion and disease prevention in primary care.

In the current health situation, NCDs are the main cause of morbidity and premature mortality in the 30-69 age group, and have been challenged by health services, especially primary care (PC). By implementing longitudinal monitoring based on the principles of integrity, quality and equity, these health services allow engagement and responsibility for the life and health of the community, strengthening relationships with the population (SATO et al., 2017).

Men have the highest morbidity and mortality indicators in the population and are generally less accustomed to accessing health services for prevention and self-care activities. It is of fundamental importance to specifically observe this population of more than 100 million men throughout Brazil via SUS (LEAL et al., 2012).

Due to the need to increase knowledge about men's health and understand the socioeconomic/cultural determinants and modifiable risk factors that drive the prevalence of CNCD in this specific population. These concerns also need to be addressed due to periodic health risks and the need to motivate the development of interventions that facilitate long-term care.

This study was necessary in order to reach an effective diagnosis and treatment. The objective was to analyze the epidemiological characteristics of hypertensive men in a Basic Health Unit in São Luís, from 2018 to 2022.

2 METHODS

This is an epidemiological, quantitative, descriptive study of systemic arterial hypertension diagnosed in men, being followed up at a Basic Health Unit in the city of São Luís - Maranhão, between the years 2018 to 2022.

Data were collected through the analysis of medical records provided by the health unit. As inclusion criteria: Consultation period between 2018 and 2022, male, age group above 30 years. As variables: age group, obesity, smoking, sedentary lifestyle, use of medications, skin color and marital status.

The study was carried out in accordance with the regulatory guidelines and norms for research involving human beings, present in Resolution No.466/12 of the National Health Council (CNS). All data were expressed anonymously to preserve the patients' privacy.
3 RESULTS AND DISCUSSION

The medical records of men diagnosed with SAH at the UBS between 2018 and 2022 were analyzed, totaling 147 occurrences. It is observed that, in terms of age group (Figure 1), only 28% (n=41) of men with NCDs of the SAH type are between 30 and 60 years old, compared to 72% (n=106) of older men.

This fact can be explained because the aging process induces several changes in the body such as atherosclerosis, arteriosclerosis, loss of vascular elasticity, increased vascular resistance and consequently increased systemic blood pressure (KOTSIS et al., 2019).

Thus, this study confirms the work of Cipullo et al., 2017, who described arterial hypertension as a lethal CNCD with progressive and significant effects with advancing age. In addition, Dias et al., 2018 highlighted that arterial hypertension occurs more frequently in men over 60 years of age, and the demand for health services and primary prevention is increasing in this age group.

Figure 2 confirms that obesity is common among the men studied. The results showed that 55% (n=80) of hypertensive men had some degree of obesity compared to 45% (n=67) of hypertensive men without obesity.

ABESO (2016) believes that the causes of obesity are complex and multifactorial and result from the interaction of genetic, environmental, lifestyle and emotional factors. Additionally, according to Ross (2019), there is a direct correlation with arterial hypertension and obesity due to increased sympathetic nerve activity and atherosclerotic inflammatory processes. (NILSON et al., 2020; FERREIRA; SZWARCWALD; DAMACENA, 2019; MALTA et al., 2018).
Regarding smoking practices, Figure 3 indicates that 24% (n=35) of the male respondents in the survey use tobacco in some form, while 76% (n=112) do not. Decreased heart rate variability is believed to be one of several mechanisms by which smokers develop systemic arterial hypertension (GONDIM, 2018). The interpretation of these results can be corroborated by a survey carried out in Brazil (2016), where São Luís - MA was the second capital with the lowest number of smokers in the country.

Regarding the lifestyle variable, Figure 4 shows that 64% (n=94) of the men surveyed said they did not practice daily physical activity, while 36% (n=53) regularly practiced some type of physical activity.

A sedentary lifestyle and high blood pressure are closely related. Physical inactivity causes overweight, obesity, increased triglycerides, decreased HDL cholesterol, increased
abdominal circumference, metabolic syndrome and insulin resistance, leading to increased systemic blood pressure (BRASIL, 2020). Therefore, several studies support the literature described and the conclusions drawn. (MOURA, 2018; FONSECA, 2017; CARVALHO et al., 2016).

![Figure 4: Characterization regarding sedentary lifestyle.](source: Authors 2022)

Regarding adherence or non-adherence to the daily use of antihypertensive medication (Figure 5), 63% (n=92) of the men with arterial hypertension used the medication daily, against 37% (n=55) who did not take all days. According to Oliveira (2018), hypertension has no cure, but serious complications (such as heart and kidney disorders, AMI, stroke, etc.) can be avoided with medication.

Medication alone is not enough, it must be combined with lifestyle changes and medications that have proven value in lowering blood pressure and reducing the risk of cardiovascular events. The studies by Karakurt and Kasikçii (2019) showed similar results to the current study.
Figure 5: Characterization regarding medication use.

Source: Authors 2022

The relationship between SAH and the patients' skin color is shown in Figure 6. The black color occurred in 44% (n=65), 29% (n=43) in mixed races, 27% (n=39) in whites. These results can be explained considering the existing heterogeneity in Brazil. A study by SBH, SBC, SBN (2021) found that high blood pressure was more common in blacks. Skin color has been recognized as a factor associated with systemic arterial hypertension, and this study confirmed this association, showing a proportionally higher prevalence in brown men than in white men.

Figure 6: Characterization according to skin color.

Source: Authors 2022

As shown in Figure 7, 67% (n=98) of the men in this study live with a partner, which promotes better self-care and changes in lifestyle. On the other hand, 33% (n=49) live without a partner and may have difficulties in following the treatment. In this regard, our results are similar to those of Guimarães (2019), who emphasized that hypertensive men who live with
their spouse are more likely to control their blood pressure than men who do not live with their spouse.

Figure 7: Characterization regarding marital status.

Source: Authors 2022

4 CONCLUSION

Knowing the health needs of specific groups provides a foundation and provides planning and health interventions with more effective results. Based on this study, the need for health promotion and disease prevention related to the treatment and monitoring of male arterial hypertension can be confirmed.

This study also demonstrates the urgency of dialogue between basic health units and the population, aiming at early and adequate diagnosis and treatment, since strategies aimed at males are not a priority. Therefore, the principle of integrality and equity of the SUS must be implemented. Strategies are also needed to promote and facilitate men's access to health care within the framework of national comprehensive health policies.

Thus, this study makes it possible to discover new ways of approaching health needs and the destructive processes resulting from male specificity, questioning access to health services, treatment and health education measures, disease prevention and recognition of needs.
REFERENCES


