

Access of hypertensive patients to dental care in Primary Health Care in Palmas, TO

Acesso de pacientes hipertensos ao cuidado odontológico na Atenção Primária à Saúde de Palmas, TO

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ABSTRACT

Systemic Arterial Hypertension (SAH) is a highly prevalent pathology in the Brazilian population and requires significant efforts from primary healthcare units, serving as the gateway to the Unified Health System (SUS) and providing ongoing care for chronic conditions. As the guiding principle of the Health Care Network (RAS), Primary Health Care (PHC) should provide comprehensive, accessible, and community-oriented health care. The aim of this study was to analyze access to dental care for patients diagnosed with SAH in the Family Health Units in the Krahô territory of Palmas, Tocantins, over the past four years (from 2019 to 2022). This is cross-sectional, observational study with a quantitative approach, whose data were collected from e-SUS reports and a structured, standardized questionnaire administered online to dentists working in the Family Health Strategy (FHS) in the Krahô health territory. In 2022, the coverage of dental care for hypertensive patients in the Krahô territory was 12.8%. Regarding the dentists who provide care in this territory, 100% of them provide care to these patients, 77.8% of them communicate with the attending physician, 100% of them measure blood pressure before treatment, and 66.7% of them report they find easy to provide this type of treatment. However, only 33.3% request complementary exams. Despite the dental professionals being capable of providing dental care to hypertensive patients in the Krahô territory, the coverage of this care is still very low.

Keywords: Dental surgeons. Primary Health Care. Systemic Arterial Hypertension.

RESUMO

A Hipertensão Arterial Sistêmica (HAS) é uma patologia de alta prevalência na população brasileira e demanda grandes esforços dos centros de saúde da família, porta de entrada do SUS e executora do cuidado continuado das condições crônicas. Como norteadora da Rede de Atenção à Saúde (RAS), a Atenção Primária à Saúde (APS) deve proporcionar cuidado em saúde por meio de atendimentos abrangentes, acessíveis e voltados à comunidade. O objetivo deste estudo foi analisar o acesso ao atendimento odontológico dos pacientes com diagnóstico de HAS nos Centros de Saúde da Família do território Krahô de Palmas, no Tocantins, nos últimos quatro anos (de 2019 a 2022). Trata-se de um estudo transversal, observacional, de caráter quantitativo, cujos dados foram coletados por meio de relatórios do e-SUS e de um questionário estruturado e padronizado, aplicado de forma on-line aos dentistas que atuam na Estratégia de Saúde da Família (ESF) do território de saúde Krahô. Em 2022, a cobertura de atendimento odontológico aos pacientes hipertensos do território Krahô foi de 12,8%. Quanto aos cirurgiões-dentistas que atendem nesse território, são 100% os que realizam atendimento a esses pacientes; sendo 77,8% que se comunica com o médico que acompanha o paciente; tendo 100% que aferem a pressão arterial antes dos atendimentos; com 66,7% que afirmam ter facilidade para realizar esse tipo de tratamento. Apenas 33,3%, entretanto, solicitam exames complementares. Apesar de os profissionais cirurgiões-dentistas se mostrarem aptos a realizar os atendimentos odontológicos dos pacientes hipertensos do território Krahô, a cobertura desse cuidado ainda é muito baixa.

Palavras-chave: Atenção Primária em Saúde. Cirurgiões-dentistas. Hipertensão Arterial Sistêmica.

INTRODUCTION

Systemic Arterial Hypertension (SAH) consists of a multifactorial disease, related to genetic/epigenetic, environmental, and social conditions, characterized by a constant increase in blood pressure (BP), that is, BP of 140 mmHg or higher and/or diastolic BP of 90 mmHg or higher, measured at least twice at different times using the correct technique, without the use of antihypertensive medication (Barroso et al., 2020). Moreover, this disease may be associated to functional and structural problems of target organs and metabolic changes, having some risk factors, such as age, overweight, ethnicity, sodium intake, alcohol consumption, physical inactivity, low level of education, genetic factors, and diabetes mellitus (Menezes, Portes & Silva, 2020). Since it is an asymptomatic disease, some target organs that may be damaged are brain, kidneys, blood vessels and the heart, being the main risk factor for stroke (Sociedade Brasileira de Hipertensão [SBH], 2020).

Furthermore, the use of antihypertensives generates adverse effects, some of which are related to oral health and the reduction of the individual's salivary flow, for example: reduced lubrication of the oral tissues which impairs the self-cleaning action, decrease of tongue movement, dysphagia and chewing

difficulty, increased occurrence of dental caries and periodontal disease, stinging and burning sensations (Mossegui, Rozenfeld, Veras & Vianna, 1999).

Another fundamental issue is the importance of knowledge about the disease, the possible complications arising from dental treatment in patients with altered blood pressure levels, the appropriate use of local anesthetics, with or without vasoconstrictors, and oral manifestations resulting from the use of antihypertensives, thus, guaranteeing safe and quality dental care (Firmo, Uchoa & Lima-Costa, 2004; Silva, Bento, Barbosa, Melo & Nascimento, 2019). The dental surgeon must also be aware that, during dental care, pain and anxiety are also factors that trigger the Sympathetic Nervous System, which can lead to increased blood pressure (Morais, 2012).

Hypertensive emergency can occur in the dental office, being characterized by raised blood pressure, intense gingival bleeding after manipulation, headache, nosebleed, malaise, dizziness, mental confusion and/or blurred vision (Pegoraro & Oliveira, 2015). During a situation like this, the dental surgeon must be able to conduct and intervene correctly, as hypertensive crises can happen to patients diagnosed with hypertension and

also to those without this comorbidity, at any time and place (Souza et al., 2019).

These data reinforce the importance of the presence of the dental surgeon in the Family Health Strategy (FHS) team, established in the country with the purpose of improving, expanding access and qualifying the public health service through Primary Health Care (PHC), in order to guarantee the resolution of the health problems from users and strengthen the services provided, generating a positive impact on the health conditions of the assisted community, including patients diagnosed with SAH (Brasil, 2006).

Therefore, carrying out periodic assessments, oral interventions, prevention, and health promotion actions for hypertensive patients promotes improved care for this group and tends to reduce oral diseases presented by these individuals that are directly related to general health and quality of life (Fróes, 2014).

According to Starfield (2002), when considering Primary Health Care, access can be related to the several ways of entering the health system, related to the location of the health center, the flexibility of hours and operating schedule of the units, and also the possibility of attending non-elective consultations and the understanding that the community has regarding the characteristics and concepts of access.

Primary Health Care (PHC) in the city of Palmas, capital of the state of Tocantins, is constituted of 34 Basic Health Units, distributed across eight health territories named after indigenous tribes: Kanela, Apinajé, Xambioá, Krahô, Karajá, Javaé, Xerente and Pankararu. Currently, PHC in Palmas has 76 oral health teams distributed in these units and these health territories.

Thus, in the present study, we sought to analyze access to dental care for patients diagnosed with systemic arterial hypertension in Primary Health Care in one of the health territories of Palmas in the last four years. The territory chosen was Krahô, located in the center-south region of the capital of Tocantins.

This study was carried out through the analysis of the perception of the dental surgeon who works at this level of care and the number of dental consultations in patients with this condition, in order to answer the following research questions: "Do patients with systemic arterial hypertension have access to dental care in primary health care in the Krahô territory of the municipality of Palmas? Do dental surgeons from the Family Health Strategy (FHS) in the Krahô territory of Palmas, in Tocantins, consider themselves capable of providing dental care to patients with SAH?"

MATERIALS AND METHODS

This is an observational, cross-sectional, quantitative study. The population of this research consisted of nine dental surgeon registered in the Family Health Strategy (FHS) of the Krahô territory, composed of four Family Health Centers: FHC Satilo Alves de Sousa (1103 South), FHC Albertino Santos (1004 South), FHC 1304 South and FHC Valéria Pereira Martins (1206 South), as well as by e-SUS data from the last four years, with the history of dental consultations of the 4,409 patients with SAH in the territory, according to the Municipal Health Department of Palmas (e-SUS Gestor), for analysis and reliability of the study.

The e-SUS data of patients classified as hypertensive and registered in the Krahô territory of Palmas, TO, were obtained by the professional responsible for information systems within the monitoring team of the Palmas Municipal Health Department and the online questionnaire was sent to all dental surgeons registered and working in the Family Health Strategy of the aforementioned Family Health Centers, in October 2022, with a deadline to return

it by the end of the same month. After reiterating their acceptance to participate in the research, each professional had access to the content of the questionnaire and responded it voluntarily and individually, without the need for collectors.

The project was approved by the Research Ethics Committee (REC) under Certificate of Presentation for Ethical Consideration (CAAE), no.: 60383922.9.0000.9187.

To analyze access to dental services in PHC, the variables used were number of patients registered as hypertensive in each health unit in the Krahô territory and number of hypertensive patients who underwent a dental consultation between 2019 and 2022.

In order to verify the perception of the dental surgeon who works in the PHC of the Krahô territory, a questionnaire was applied, whose selected variables were: whether the hypertensive patient is monitored; how often this monitoring is carried out; whether a blood pressure measurement is requested before care; whether communication is maintained with the doctor who monitors the hypertensive patient; if additional tests are requested, if an improvement in the quality of life of hypertensive patients who undergo dental care is noticed and if any difficulty is recognized in carrying out treatment or dental care for hypertensive patients.

The analysis was performed using frequency and percentage distribution.

RESULTS AND DISCUSSION

In Table 1, it presents the results that characterize the population studied. It consisted of 4,409 (100%) patients with SAH in the Krahô territory. The majority of them, 34.9%, were situated in the FHC Satilo Alves (1103 South), the other units accounted for 24.4% in the FHC Albertino Santos (1004 South), 23.5% in the FHC Valéria Pereira Martins (1206 South) and 17.2% in FHC 1304 South.

Table 1

Distribution of hypertensive patients registered in family health centers (FHC) in the Krahô territory, with the reference year being 2022.

FHC	Frequency (no.)	Percentage (%)
1004 South	1075	24.38
1206 South	1036	23.5
1304 South	761	17.26
1103 South	1537	34.86
Total	4409	100

Source: The authors.

Among hypertensive patients in the Krahô territory, Table 2 represents how many of them had access to dental care in the respective years 2019, 2020, 2021 and 2022. The Figure 1 identifies the evolution in each year.

The Tables 3 and 4 show the assessment of the knowledge of dental surgeons from the Family Health Strategy in the Krahô territory which took part in the research on issues related to arterial hypertension.

The National Health Survey (NHS), carried out by the Brazilian Institute of Geography and Statistics (IBGE, 2019), reported that since 2013 there has been an increase in individuals diagnosed with hypertension and the country has a total of 38.1 million Brazilians older than 18 years with the disease, which represents one in three Brazilians. This pathology has a high prevalence, but low levels of control.

Table 2

Patients who accessed dental care in each year of analysis at the health units in the territory.

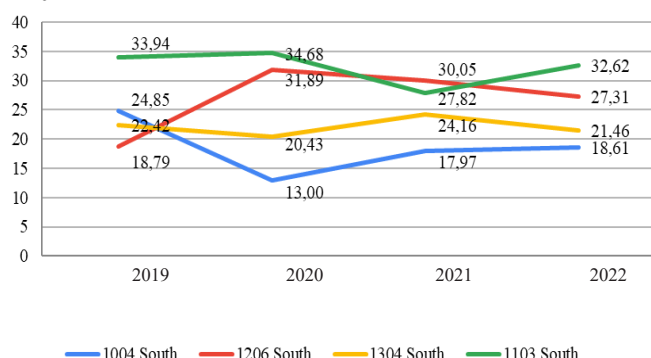
FHC	2019 (no.)	2020 (no.)	2021 (no.)	2022 (no.)
1004 South	82	42	113	105
1206 South	62	103	189	154
1304 South	74	66	152	121
1103 South	112	112	175	184
Total	330	323	629	564

Source: The authors.

The evolution of dental access by hypertensive patients in the Krahô territory is shown in Figure 1.

Figure 1

Dental care for hypertensive patients during 2019, 2020, 2021 and 2022.



Source: The authors.

Table 3

Assessment of the knowledge of FHS dental surgeons in the Krahô territory.

	no.	%
Do you carry out follow up?		
Yes.	9	100
No.	0	0
How often?		
Does not follow up.	1	11.11
From one to three months.	2	22.22
From four to six months.	5	55.56
Once a year.	1	11.11
Do you request additional exams?		
Yes.	3	33.33
No.	6	66.67
Do you notify the doctor who monitors the hypertensive patient?		
Yes.	7	77.78
No.	2	22.22

Source: The authors.

Costa, Vasconcelos, Vasconcelos, Queiroz & Barbosa (2020) describe a relationship between the loss of dental elements, arterial hypertension, and the increase in age, given immunological deficiency, lack of hygiene, prevention, and medical monitoring guidelines. These facts reinforce the need for dental care in this group.

Table 4

Assessment of the knowledge of FHS dental surgeons in the Krahô territory.

	no.	%
Do you request blood pressure measurement?		
Sim.	9	100
Não.	0	0
Did the patient experience an improvement in QoL after dental follow-up?		
Yes.	9	100
No.	0	0
Did the patient resist dental follow-up?		
Yes.	3	33.33
No.	6	66.67
Did you have difficulty to carry out dental treatment/follow-up?		
Yes.	3	33.33
No.	6	66.67

Source: The authors.

In the present study, after evaluating the characteristics of dental practices carried out by dental surgeons for hypertensive patients in the territory, 100% of those interviewed reported to provide dental care to this group of patients, a result also found by Macêdo, Lucena, Lopes & Batista (2018).

Regarding the frequency of dental care for hypertensive patients, the majority of them (55.5%) have follow-up visits at intervals of four to six months. However, data extracted from e-SUS demonstrate low coverage of dental care for patients with SAH in the Krahô territory in all years of study (2019, 2020, 2021 and 2022). In 2022, only 18.6% of hypertensive patients at FHC 1004 South received dental care, followed by 27.3% at FHC 1206 South, 21.5% at FHC 1304 South and 32.6% at FHC 1103 South. It is essential that professionals dedicate themselves to provide accessibility to primary care services so that patients are motivated to return (Silva et al., 2019).

Furthermore, in order to expand dental care for hypertensive patients, it is essential that the FHS carries out a situational diagnosis of the area in order to be able to draw up a profile of the population and thus expand dental care to this target audience (Campos, Faria & Santos, 2010).

It is important to note that in 2020, the World Health Organization (WHO) declared a Public Health Emergency due to the COVID-19 pandemic, caused by an infectious and contagious virus whose transmission occurs through the mouth or nose of an infected person (WHO, 2020). In this way, all areas of healthcare have been affected, including dentistry.

Thus, it is possible to relate this period to the reduced number of dental services carried out in 2020 (with 323 consultations, a much lower number than the 629 services carried out in 2021). According to Danigno et al. (2022), this reduction in dental care (less than 50%) in PHC during the pandemic is related to the unavailability of all personal protective equipment (PPE), the insufficient quantity of these PPE for dental care and the implementation of teletriage at the Family Health Units.

On the other hand, in this study, it shows a significant increase in the number of dental appointments in the years following 2020, with 629 and 564, respectively, in 2021 and from January to November 2022. In accordance with Mattos and Pordeus (2020), the changes in the routine of the dental clinic,

the increase in the services provided and coupled with increasing needs are expected to have significant implications for the population with low socioeconomic status, which will increase the demand for public health services in the coming years.

With regard to clinical management of hypertensive patients, only 66.7% of the dental surgeons interviewed requested complementary laboratory tests for SAH patients. Malamed (2005) and Ximenes (2005) emphasize that, in situations in which the dental surgeon identifies the need, additional tests must be requested, such as complete blood count, fasting blood glucose, coagulogram, including blood pressure measurement before and/or during dental care. Satisfactory results ensure greater safety during care, as they indicate that the patient is compensated.

Similarly, the dental surgeons interviewed in this study unanimously answered that they measure the blood pressure (BP) of the patient before carrying out the consultation. This differs from the result obtained by Rodrigues, Pinheiro & Aragão (2015), in which only 52% of the professionals interviewed measure BP before starting the procedures. According to the Brazilian Society of Cardiology (2016), patients should have their blood pressure measured prior to any procedure in the dental office and at all subsequent consultations. Additionally, the study by Salim et al. (2011) reported that 74.4% of the patients assessed were unaware of their SAH and, therefore, had not been diagnosed and treated to date, a fact that shows the importance of BP measurement by the dental surgeon.

In this study, 77.8% of the dental surgeons interviewed interacted with the medical doctor, a slightly lower result than that obtained in the study by Nascimento et al. (2011), in which 90.9% of respondents communicate with other professionals when caring for hypertensive patients. Soares, Salles, Irala & Limongi (2006) recommend shared care with other health professionals, such as nurses and/or medical doctors, in order to reduce the risks of complications in the dental office and find ideal therapeutic measures.

According to Oliveira, Simone & Ribeiro (2010), most dentists have resistance and difficulties in treating patients with SAH, due to the application of local anesthetics with vasoconstrictors and due to possible pharmacological interactions with antihypertensive medications. In this study, however, only 33.3% of dental surgeons reported to have difficulties in treating this group of patients. Possibly, this difference is due to the fact that 12 years separate the two studies and, in this period, there has been an evolution in the care offered by Primary Health Care, derived from professional training and the improvement of the infrastructure of the units that are part of it.

Regarding the improvement in quality of life derived from comprehensive care for patients with chronic conditions, the study by Aguilera et al. (2020) states that the assessment of oral health and management of periodontal disease establish oral/general health and enable a better quality of life for patients with SAH. This result was reiterated by the present study, in which 100% of those interviewed noted improvements in the quality of life of their patients after dental care.

CONCLUSION

Despite of the availability of dental care services within Primary Care for patients with SAH in the Krahô territory in Palmas, it was observed that there is low coverage of dental care for these patients, a situation that was worsened during the pandemic period.

The dental surgeons who work in the Family Health Centers (FHCs) monitor hypertensive patients with satisfactory frequency and engage collaboratively with other professionals in

the multidisciplinary team when providing care to this population, demonstrating that they do not have major difficulties executing these activities. Few of them, however, request supplementary exams, thereby compromising the acquisition of essential information for effective dental management in patients with chronic conditions.

Hence, there is a need for further studies aimed at identifying potential factors contributing to non-adherence to dental treatment among hypertensive patients, considering that professionals are able to carry it out.

COMPETING INTERESTS

The authors declare that there are no conflicts of interest.

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AUTHOR CONTRIBUTIONS

Conceptualization: L. S. C., I. A. B. L. *Data curation:* L. S. C. *Formal analysis:* I. A. B. L. *Funding acquisition:* L. S. C., A. A. S., D. M. R., S. M. S. *Investigation:* L. S. C., A. A. S. *Methodology:* S. M. S. *Project administration:* L. S. C. *Resources:* D. M. R. *Software:* I. A. B. L. *Supervision:* I. A. B. L. *Validation:* A. A. S. *Visualization:* L. S. C. *Writing the initial draft:* L. S. C. *Revision and editing of writing:* L. S. C., I. A. B. L.

PEER REVIEW

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