## **EDITORIAL**

## The Role of Pharmacists in Antihypertensive Pharmacotherapy

Christianne Bretas Vieira Scaramello,<sup>10</sup> Flavia Valeria dos Santos Almeida<sup>10</sup>

Universidade Federal Fluminense,<sup>1</sup> Niterói, RJ - Brazil

Editorial referring to the article: Pharmaceutical Care in Primary Care: an Experience with Hypertensive Patients in the North of Brazil

Hypertension encompasses a preventable risk factor associated with a significant global burden of cardiovascular disease (CVD) and premature death. Its prevalence is rising worldwide due to population aging, unbalanced diets, and sedentary, especially in low- and middle-income countries.<sup>1</sup> Prevalence data in Brazil vary according to the database. However, about 30% of adults present blood pressure of 140/90 mmHg or more, with CVD representing 22.6% premature passing.<sup>2</sup> This link between hypertension and CVDs-related deaths highlights the relevance of blood pressure control.

In 2021, the World Health Organization elaborated evidence-based guidance for the pharmacological treatment of nonpregnant adults with an accurate diagnosis of hypertension who have already received counseling for lifestyle modification.<sup>3</sup> It is crucial to set blood pressure threshold to pharmacological therapy beginning and treatment targets. In addition, the determination of followup visits to adjust monotherapy or dual therapy embracing single or dual pill combination medications is mandatory. Comorbidities, unwanted effects, cost, and acceptability must also be evaluated. In 2020, the Brazilian Society of Cardiology also published decision and therapeutic goals for hypertension management.<sup>2</sup>

In this context, the proposal of Gomes et al.<sup>4</sup> encompassing follow-up experience with treated hypertensive patients is more than interesting. This kind of study is necessary to provide evidence, allowing the updates of such guidelines.

Gomes et al.<sup>4</sup> intended to evaluate the impact of a pharmaceutical follow-up program in a city in the north

## **Keywords**

Hypertension; Risk Factors; Patient Care Management; Medication, Adherence; Epidemiology; Urban Area; Mortality and Morbidity. of Brazil on blood pressure control in hypertensive patients attending primary health centers. This query is valid due to the relationship between poor adherence to drug treatment and uncontrolled blood pressure. They developed an observational, cross-sectional, descriptive study enrolling 163 patients attending two public primary health care centers in the countryside and the urban area to attain this purpose. The authors applied the Morisky test to assess adherence to the antihypertensive treatment. Additionally, they performed pharmacotherapy followup of patients through the Dader method.

After proper data analysis, Gomes et al.<sup>4</sup> showed that about 95% of the patients were not adherent to antihypertensive drug therapy. Furthermore, the adherence rate between genders was higher in men than in women. In addition, uncontrolled blood pressure was mapped in 77.2% of the individuals. However, it was observed that pharmacotherapy follow-up significantly improved blood pressure control, particularly systolic blood pressure. In conclusion, the authors stated that pharmaceutical care in accordance with local specificities improves antihypertensive therapy.

Thus, the pharmacists' performance in this process is highlighted by Gomes et al. in their work.<sup>4</sup> However, the guidelines do not include this kind of pharmacotherapeutic follow-up despite their role in the identification and intervention of drug-related problems (DRPs), especially in primary health care institutions. As DRPs are mainly related to effectiveness and adverse reactions, clinical pharmacists of pharmaceutical care programs should prioritize these key points.<sup>5</sup>

DRPs may be defined as situations involving drug therapy that has the potential to interfere with wanted health outcomes. They encompass unnecessary, inadequate, or ineffective drug treatment; adverse drug events; inappropriate dosage; and poor adherence.

**Mailing Address: Christianne Bretas Vieira Scaramello** 

Instituto Biomédico - Universidade Federal Fluminense - Rua Prof Hernani Mello, 101. Postal code: 24210-130, Niterói, RJ – Brazil. E-mail: chrisbretas@gmail.com Consequently, DRP can lead to unnecessary outpatient visits, hospital admissions, and long-term care, interfering with clinical treatment and increasing patients' financial burden.<sup>6</sup>

The finding of Gomes et al.<sup>4</sup> is strongly corroborated by literature. Many hypertensive patients worldwide experience DRP associated with poor blood pressure

References

- 1. Mills KT, Stefanescu A, He J. The global epidemiology of hypertension. Nat Rev Nephrol. 2020;16(4):223-37. doi: 10.1038/s41581-019-0244-2.
- Barroso WKS, Rodrigues CIS, Bortolotto LA, Mota-Gomes MA, Brandão AA, Feitosa ADM, et al. Diretrizes Brasileiras de Hipertensão Arterial – 2020. Arq Bras Cardiol. 2021; 116(3):516-658. doi: 10.36660/abc.20201238.
- Al-Makki A, DiPette D, Whelton PK, Murad MH, Mustafa RA. Hypertension Pharmacological Treatment in Adults: A World Health Organization Guideline Executive Summary Hypertension. Hypertension. 2022;79(1):293-301. doi: 10.1161/ HYPERTENSIONAHA.121.18192.
- Gomes IG, Rossi EM, Mendes SJ, Santos BRM, Sabino W. Pharmaceutical Care in Primary Care: an Experience with Hypertensive Patients in the North of Brazil. Int J Cardiovasc Sci. 2022; 35(3), 318-326. doi: 10.36660/ ijcs.20200257.
- Ni XF, Yang CS, Bai YM, Hu ZX, Zhang LL. Drug-Related Problems of Patients in Primary Health Care Institutions: A Systematic Review. Front. Pharmacol. 2021; 12 (698907): 1-14. doi: 10.3389/fphar.2021.698907.

control. This fact is enhanced by polypharmacy related to population aging.<sup>7-9</sup> Thus, the implementation of clinical pharmacy services for all patients with hypertension, considering all particularities of the geographic region, should be recommended globally through the guidelines, following the document produced by EuroPharm Forum and the WHO CINDI Programme.<sup>10</sup>

- Garin N, Sole N, Lucas B, Matas L, Moras D, Rodrigo-Troyano A et al. Drug-related problems in clinical practice: a cross-sectional study on their prevalence, risk factors and associated pharmaceutical interventions. Sci Rep. 2021;11(1):883. doi: 10.1038/s41598-020-80560-2.
- Skowron A, Polak S, Brandys J. The impact of pharmaceutical care on patients with hypertension and their pharmacists. Pharmacy Practice (Granada). 2011;9(2):110-5. doi: 10.4321/s1886-36552011000200009.
- Abu Farha R, Basheti I, Abu Al Ruz H, Alsaleh A, Abu Ruz S. Assessment of drug-related problems and their impact on blood pressure control in patients with hypertension. Eur J Hosp Pharm. 2016;23(3):126–30. doi:10.1136/ejhpharm-2015-000712.
- Kusumawardani LA, Andrajati R, Nusaibah A. Drug-related problems in hypertensive patients: A cross-sectional study from Indonesia. J Res Pharm Pract. 2020;9(3):140-5. doi: 10.4103/jrpp.JRPP\_20\_16.
- 10. Pharmacy-based hypertension management model: protocol and guidelines. EUR/04/5049481. ISBN WHOLIS number: E85730. Available from: http://apps.who.int/iris/bitstream/handle/10665/107638/E85730.pd f;jsessionid=28F0C0AE012DA24DEB4361D681B3C9DD?sequence=1.