

Blood Pressure Control: The secret is...Team Work!

Andrea Pio-Abreu¹ and Luciano F. Drager^{1,2} 

Unidade de Hipertensão, Divisão de Nefrologia, Faculdade de Medicina da Universidade de São Paulo,¹ São Paulo, SP - Brazil

Unidade de Hipertensão, Instituto do Coração (InCor), Faculdade de Medicina da Universidade de São Paulo,² São Paulo, SP - Brazil

Short Editorial related to the article: Blood Pressure Control and Associated Factors in a Real-World Team-Based Care Center

Hypertension is one of the leading causes of cardiovascular death.¹ Indeed, data from the Heart and Stroke Statistics showed that 45% of the cardiovascular mortality is potentially attributed to hypertension.¹ This worrying scenario has not been changing in the last decades despite the availability of non-pharmacological interventions and the development of several anti-hypertensive classes that effectively contributed to blood pressure (BP) control.²⁻⁵ The reasons for our low effectiveness in controlling BP at the population level are multiple, including the lack of organized public policies regulating salt consumption and increasing awareness, early detection, and effective treatment. Additional challenges include the asymptomatic characteristic of hypertension, therapeutic inertia, among others.¹

In this edition of the *Arquivos Brasileiros de Cardiologia*, Jardim et al.⁶ reported data from a retrospective study exploring a multidisciplinary team strategy in the rate of BP control (set at the traditional <140/90 mmHg). The authors evaluated demographic and clinical data of 1548 hypertensive patients from a specialized hypertension center who have been followed up regularly for 7.6 ± 7.1 years (mean age 62 years, 73.6% women). The multidisciplinary approach described by the authors consisted by the availability of nurses, nutritionists, occupational therapists, physical educators, psychologists and music therapists working in conjunction with the staff physicians (general practitioners, cardiologists, endocrinologists, and nephrologists). The maximal interval for medical outpatient visits was 3 months. According to the patients' needs (determined by the clinical evaluation), the physicians scheduled visits to the professionals mentioned above in a flexible demand. In addition, educational and health promotion activities were performed every two weeks with patients. All this information was recorded on a standardized form. Using this strategy, the authors found that this multidisciplinary team approach was associated with an overall 68% BP control, being more prominent in those aged ≥ 60 years (OR 1.45; 95% CI [1.13-1.90]), and females (OR

1.36; 95% CI [1.09-1.88]). In contrast, patients with diabetes were associated with a lower probability of reaching the BP target compared to patients without diabetes. Interestingly, no significant differences in the number of anti-hypertensive drugs were observed in the groups who controlled or not BP. This finding suggests that the adherence of this multidisciplinary approach may vary as usually observed with any other intervention.

It is worth mentioning the merit of the related service, whose multidisciplinary practice has been adopted, according to the authors, for over 25 years.⁶ The BP control is impressive, considering the current estimates of BP control in Brazil (usually lower than 30% in individual studies).³ Overall, this investigation's major contribution is that the literature is relatively scarce (particularly from large multicenter observational or randomized studies) in addressing the potential impact of a multidisciplinary team in patients with hypertension. Previous studies involving modest sample sizes suggested the importance of nurses in improving adherence to anti-hypertensive treatments and white coat-effect.⁶⁻¹¹ Similarly, the active approach from pharmacists, physical educators, and nutritionists seem to contribute to improving adherence and BP control.^{12,13} However, it is crucial to define if the whole team structure available (and not distinct 'compartments') may contribute to the effectiveness of BP control. In other words, is the whole better than any individual component or the sum of the parts? The study conducted by Jardim et al. was not designed to address this question but highlighted that the fight against hypertension is not based on a single actor. Unfortunately, the lack of a control group (for instance, patients from other centers with no access to an organized multidisciplinary team approach) and the retrospective design prevent any definitive conclusions but pave the way for future investigations in this important research area. Particular attention should be devoted to patients with diabetes. The lower rate of BP control challenging us for extra efforts for this high cardiovascular risk population.

Keywords

Hypertension; Blood Pressure; Prevention and Control; Risk Factors; Patient Care Team/trends; Antihypertensive Agents; Medication Adherence.

Mailing Address: Luciano F. Drager •
Unidade de Hipertensão, Instituto do Coração (InCor), Faculdade de Medicina da Universidade de São Paulo – Av. Dr. Eneas de Carvalho Aguiar, 44. Postal Code 05403-900, São Paulo, SP - Brazil
E-mail: luciano.drager@incor.usp.br

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References

1. Virani SS, Alonso A, Benjamin EJ, Bittencourt MS, Callaway CW, Carson AP, et al. Heart Disease and Stroke Statistics-2020 Update: A Report From the American Heart Association. *Circulation*. 2020;141(9):e139-e596.
2. Sever PS, Messerli FH. Hypertension management 2011: optimal combination therapy. *Eur Heart J*. 2011;32(20):2499-506.
3. Malachias MVB, Póvoa RMS, Nogueira AR, Souza D, Costa LS, Magalhães ME. 7ª Diretriz Brasileira de Hipertensão Arterial: Capítulo 3 - Avaliação Clínica e Complementar. *Arq Bras Cardiol*. 2016;107(3 Supl.3):1-83.
4. Krieger EM, Drager LF, Giorgi DMA, Pereira AC, Barreto-Filho JAS, Nogueira AR, et al. Spironolactone versus clonidine as a fourth-drug therapy for resistant hypertension: The ReHOT randomized study (Resistant Hypertension Optimal Treatment). *Hypertension*. 2018;71(4):681-90.
5. Pio-Abreu A, Drager LF. Resistant hypertension: time to consider the best fifth anti-hypertensive treatment. *Curr Hypertens Rep*. 2018;20(8):67.
6. Jardim TV, Souza ALL, Barroso WKS, Jardim PCBV. Blood Pressure Control and Associated Factors in a Real-World Team-Based Care Center. *Arq Bras Cardiol*. 2020; 115(2):174- 181.
7. Barkauskas VH, Pohl JM, Tanner C, Onifade TJ, Pilon B. Quality of care in nurse-managed health centers. *Nurs Adm Q*. 2011;35(1):34-43.
8. Himmelfarb CR, Commodore-Mensah Y, Hill MN. Expanding the role of nurses to improve hypertension care and control globally. *Ann Glob Health*. 2016;82(2):243-53.
9. Rudd P, Miller NH, Kaufman J, Kraemer HC, Bandura A, Greenwald G, et al. Nurse management for hypertension. A systems approach. *Am J Hypertens*. 2004;17(10):921-7.
10. Carter BL, Bosworth HB, Green BB. The hypertension team: the role of the pharmacist, nurse, and teamwork in hypertension therapy. *J Clin Hypertens (Greenwich)*. 2012;14(1):51-65.
11. Guerra-Riccio GM, Giorgi DMA, Consolin-Colombo FM, Barreto-Filho JAS, Lopes HF, Camargo ALF, et al. Frequent nurse visits decrease white coat effect in stage III hypertension. *Am J Hypertens*. 2004;17(6):523-8.
12. Borenstein JE, Graber G, Saltiel E, Wallace J, Ryu S, Archi J, et al. Physician-pharmacist comanagement of hypertension: a randomized, comparative trial. *Pharmacotherapy*. 2003;23(2):209-16.
13. Han E, Sohn HS, Lee JY, Jang S. Health behaviors and medication adherence in elderly patients. *Am J Health Promot*. 2017;31(4):278-86.

