### LETTERS TO THE EDITOR

# In Reference to, "As-Needed Intravenous Antihypertensive Therapy and Blood Pressure Control"

Taha Ayach, MD1, Aibek E. Mirrakhimov, MD1

Department of Medicine, Division of Hospital Medicine, University of Kentucky College of Medicine, Lexington, Kentucky.

We read with great interest the study by Lipari et al. published recently in the Journal of Hospital Medicine. The authors addressed a commonly encountered issue about frequent use of intravenous (IV) antihypertensives in asymptomatic hospitalized patients.

There is little published about treatment of acutely elevated blood pressure in asymptomatic inpatients, although the practice seems to be common and based on poorly justified beliefs.<sup>2</sup> We believe that many healthcare providers "treat the numbers" in such situations by dangerous misuse of potent medications leading to potential safety concern, which is associated with unnecessary risks and excess costs and possibly increased length of stay, as demonstrated in previous reports<sup>3</sup> but not specifically addressed in this study.

So what can be done to address this problem? We argue against routine ordering of "as needed" IV antihypertensives, but rather encourage a confirmation of the accuracy of measurements, assess patients and pay attention to concomitant conditions (eg, anxiety or pain), consider shortacting oral antihypertensive medications, and focus on patient safety rather than a false sense of healthcare team self-comfort. We believe that hospitals' leadership should stress the importance of proper use of medications to both clinicians and nursing staff.

#### References

- 1. Lipari M, Moser LR, Petrovitch EA, Farber M, Flack JM. As-needed intravenous antihypertensive therapy and blood pressure control [published online November 12, 2015]. *J Hosp Med.* doi:10.1002/jhm2510.
- Weder AB. Treating acute hypertension in the hospital: a lacuna in the
- guidelines. *Hypertension*. 2011;57:18–20. Weder AB, Erickson S. Treatment of hypertension in the inpatient setting: use of intravenous labetalol and hydralazine. J Clin Hypertens. 2010;12:29-33.

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# The Authors Reply, "As-Needed Intravenous Antihypertensive Therapy and Blood Pressure Control"

John M. Flack, MD, MPH, FAHA, FACP, FASH1, Lynette R. Moser, PharmD2, Melissa Lipari, PharmD, BCACP3, Elizabeth Petrovitch, PharmD, BCPS4, Margo Farber, PharmD5

<sup>1</sup>Division of General Internal Medicine, Hypertension Section, Department of Medicine, Southern Illinois University, Springfield, Illinois; <sup>2</sup>Eugene Applebaum College of Pharmacy, and Health Sciences, Wayne State University, and Department of Pharmacy, Harper University Hospital, Detroit, Michigan; <sup>3</sup>Department of Pharmacy, Harper University Hospital, Detroit, Michigan, Eugene Applebaum College of Pharmacy and Health Sciences, Wayne State University, and Department of Pharmacy, St. John Hospital and Medical Center, Detroit, Michigan; Department of Pharmacy, Harper University Hospital, Detroit, MI; 5 Department of Pharmacy, University of Michigan Hospital, Ann Arbor, MIchigan.

We appreciate the comments of Drs. Ayach and Mirrakhimov. Our study found that the routine ordering of "as needed" intravenous (IV) antihypertensives was commonly done for patients who had blood pressure (BP) elevations that did not post any imminent danger to the patients.<sup>1</sup> Thus, the preemptive ordering of IV BP medications that would be administered without any clinical assessment is a practice that cannot be defended. We are in complete agreement that the accuracy of the BP measurement should be undertaken along with consideration of factors that might explain the BP elevation such as hypoxia, hypercarbia, pain, and IV saline infusions. However, we would not shift our prescribing habits toward short-acting antihypertensives drugs (eg, nifedipine) that were never approved for hypertension treatment despite their use for this condition.<sup>2</sup> Rather, we put forth the approach of primarily focusing on the aforementioned patient factors that may explain BP elevations and, in situations where such conditions do not exist, gradually up-titrate/optimize the prescribed oral antihypertensive drug regimen while also emphasizing prudent dietary changes (eg, low-sodium diet).<sup>3</sup>

### References

- 1. Lipari M, Moser LR, Petrovitch EA, Farber M, Flack JM. As-needed intravenous antihypertensive therapy and blood pressure control [published online November 12, 2015]. *J Hosp Med.* doi:10.1002/jhm2510. Decker WW, Godwin SA, Hess E, Lenamond CC, Jagoda AS. Clinical
- policy: critical issues in the evaluation and management of adult patients with asymptomatic hypertension in the emergency department.
- Ann Emerg Med. 2006;47:237–249.
  Flack JM, Yunis C, Preisser J, et al. The rapidity of drug dose escalation influences blood pressure response and adverse effects burden in patients with hypertension. *Arch Intern Med.* 2000;160:1842–1847.

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