How to Improve Patients’ Adherence to Antihypertensive Therapy: A Simple Solution for a Big Trouble

Giuliano Tocci, Vivianne Presta, and Massimo Volpe

Worldwide control of essential hypertension is suboptimal. Several epidemiological studies and clinical surveys have independently and repeatedly shown that the proportions of treated hypertensive patients who achieved the recommended blood pressure (BP) targets (i.e., systolic/diastolic BP levels below 140/90 mm Hg) ranged from about 20% to 45% in the general population, with even lower proportions reported in high or very high cardiovascular risk individuals. Such estimations might be reconsidered after the publication of the latest sets of both North American and European guidelines on hypertension, which have redefined the BP targets to be achieved under pharmacological therapies in different age strata and clinical settings.

Several explanations have been proposed to explain these disappointingly low rates of BP control recorded also in Western countries. Among the potential causes, the most commonly reported is the poor adherence to prescribed medications, which may heavily account for the lack of BP control in treated hypertensive patients. Indeed, it has been reported that about half of treated hypertensive patients did not keep the prescribed pharmacological therapies after 1 year and that about 3 quarters of treated patients did not have consultations from their general practitioners for repeated prescriptions after 2 years of treatment. This may lead to a substantially high proportion of patients with poorly treated, uncontrolled hypertension, who are exposed to higher risk of developing hypertension-mediated organ damage and major cardiovascular complications, including myocardial infarction, stroke, renal disease, congestive heart failure, and death, compared with controlled hypertensive patients. Therefore, lack of adherence to any antihypertensive therapy has become a key medical target, in order to achieve a reduction of hypertension-related cardiovascular burden, and new strategies are currently tested to fulfill this goal.

Among these, self-measurement of BP levels at home has recently allowed to partially reduce the gap between attained and observed BP control rates. International guidelines are strongly consistent in recommending home BP measurement to improve BP control, ameliorate adherence to prescribed medications, and possibly to reduce cardiovascular outcomes.

In this issue of the American Journal of Hypertension, Cuffee et al. tested in a small cohort of 213 adult individuals (mean age 59 years) the clinical effectiveness of home BP measurement and specifically designed educational training on this technique, comparing this approach to usual care on pharmacological adherence. Both groups showed lower 24-hour systolic and diastolic BP levels from screening to final visits. Reductions of average systolic, diastolic, and mean BP over the 24-hour period were slightly, although not significantly, higher in intervention group compared with control group. Also, numbers of antihypertensive medications were higher in the former than in the latter group from baseline to end of the follow-up, without differences between groups.

Although this study failed to demonstrate a statistically significant difference in terms of improved adherence and better BP control between intervention and control groups, in our opinion the approach adopted deserves to be tested in a large-scale study because it may have important, clinically relevant, implication. In addition, the relatively short follow-up period adopted in the study might not have permitted to properly evaluate the clinical implications of the educational interventions on hypertension management and control. As properly acknowledged by the authors, the study was also limited by the fact that the investigators did not track how many participants contacted their physicians by phone or by mail about their elevated BP readings, being these contacts highly frequent in the real world and often related to dose adjustments and therapeutic revisions in treated hypertensive patients. They did not collect data on how many participants had home BP monitors and if they were using them during the study.

Correspondence: Giuliano Tocci (giuliano.tocci@uniroma1.it).

Initially submitted November 11, 2018; date of first revision November 21, 2018; accepted for publication November 27, 2018; online publication November 30, 2018.
Whatever the case, educational training and counselling aimed at improving awareness and knowledge about hypertension and its potentially life-threatening consequences should be always considered a fundamental step of any treatment strategy aimed at attending a better BP control and at reducing the burden of hypertension-related cardiovascular disease. Also systematic prescription of home BP diary during treatment may be of great help for physicians treating hypertension. The lack of statistical significant advantages in the study by Cuffee et al. does not rule out the potential advantages of educational training on home BP monitoring and needs to be tested in larger analyses with a sufficient follow-up and more detailed information on drug management during the course of the study.

**DISCLOSURE**

The authors declared no conflict of interest.

**REFERENCES**