■ Editorial

Can Home Blood Pressure Monitoring Help Control Blood Pressure and Increase Drug Compliance of Hypertensive Patients?

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The accuracy of blood pressure measurement in managing hypertension cannot be overemphasized. Studies report that there are several issues with office blood pressure measurements. First, they are highly variable, and second, they do not accurately reflect blood pressure in real life.¹⁾ Blood pressure outside the clinic can be measured by monitoring home blood pressure (home blood pressure monitoring, HBPM) or ambulatory blood pressure (ambulatory blood pressure monitoring). HBPM markedly contributes towards hypertension management, as it helps diagnose white coat hypertension and improves cardiovascular disease risk prediction.

In addition, many studies have reported on the other benefits of HBPM, including its effect on blood pressure control and drug compliance of hypertensive patients.

In the present issue, Muhammad et al.²⁾ investigated whether HBPM can improve office blood pressure control and treatment compliance among hypertensive patients. Eighty-eight subjects with hypertension were randomly assigned into an HBPM or usual care group. The authors compared the office blood pressure and medication adherence score at randomization and at the end of the follow-up period (2 months) between the groups, and found no significant differences across all variables.

In the light of these results, can we conclude that there are no additional benefits of blood pressure control and drug compliance?

I do not think so. First, a meta-analysis study of 37 randomized controlled trials showed an average difference of -3.9 mm Hg in systolic blood pressure (95% confidence interval [CI], -3.4 to -8.9 mm Hg) in the HBPM group compared to the control group,³⁾ and the -4.74 mm Hg difference in pressure observed in this study is within this CI range. Perhaps, it may be due to problems of precision of sample estimates associated with small sample sizes.

The effects of HBPM on compliance have not been extensively investigated; therefore, a definitive conclusion has not been drawn. This is because one meta-analysis has reported better drug compliance in the HBPM group,⁴⁾ but other studies have reported inconsistent results. Therefore, more research is required on this subject.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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