Response to Comparing Blood Pressure Measurement Methods: Differences Depend on Blood Pressure Height

We are pleased that Scherpbier-de Haan et al recognize the advantages of automated office blood pressure (AOBP) measurement over manual BP in the assessment of an individual’s BP status. Several studies in different populations have confirmed that AOBP is more accurate than manual BP when each technique is compared with the mean awake ambulatory BP, a gold standard for predicting future cardiovascular events in relation to BP status. We are also in agreement when it comes to which patients benefit most from AOBP. The white coat response is much greater in patients with higher manual office BP readings, especially in an older female population. White coat hypertension is generally not a concern if manual BP readings are normal. AOBP was originally developed to reduce the white coat response in patients with high office BP readings, and it appears to have achieved this objective.

Scherpbier-de Haan et al have recommended a modification of the standard Bland-Altman analysis using a logarithmic transformation of the BP data. Although this approach may demonstrate more clearly the reduced white coat effect in the normotensive range, the more sophisticated analysis of the BP data does not change the interpretation of our findings.

Should AOBP only be performed in patients with high manual office BP readings? At the present time, mercury and aneroid sphygmomanometers are ubiquitous, whereas AOBP is in the process of gradually being introduced into routine clinical practice in Canada and elsewhere. Based on increasing evidence supporting the superiority of AOBP over manual BP, we expect a more widespread use of AOBP in routine clinical practice during the next 5 to 10 years. Meanwhile, it would seem reasonable to follow patients who are clearly normotensive with manual BP while increasing the use of AOBP to monitor office readings in patients with a documented white coat effect. However, there would seem to be little reason to perpetuate manual BP measurement if AOBP devices are readily available to provide more accurate readings free from the observer error and observer-patient interaction, which promote a white coat response when manual BP measurements are performed in routine clinical practice. As we move further into the 21st century, automated BP measurement, whether in the office, at home, or over a 24-hour period, will likely become standard for the evaluation of an individual’s BP status.

Disclosures

None.

Martin G. Myers
Division of Cardiology
Sunnybrook Health Sciences Centre
Toronto, Ontario, Canada

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