Editorial Commentary

Ambulatory Blood Pressure Monitoring for Routine Clinical Practice

Martin G. Myers

“The inherent variability of the blood pressure has led to problems in the diagnosis, treatment, and prognosis of hypertension. Knowing how the blood pressure fluctuates with the stresses and strains of everyday life should help in assessing the severity of hypertension, the response to treatment, and the prognosis in individual cases.”


I t has taken 40 years for the ideas first proposed in this quote from an article on a new portable device for recording blood pressure (BP) to be considered for routine clinical practice. However, it did not take this long for astute researchers to recognize the importance of the development of this portable BP recorder, later known by the name of its manufacturer, the Remler Company.

By 1966, Maurice Sokolow et al had used the semi-automated Remler device to compare casual office BP with readings taken during awake hours in 124 patients with a diagnosis of hypertension. Despite the rather primitive technology by today’s standards, Sokolow et al were able to show that the ambulatory BP was a better predictor of hypertensive complications than the casual office BP. Sokolow and colleagues followed-up on this initial observation with a prospective observational study comparing the predictive power of the standard office BP versus the Remler device in 1076 patients with essential hypertension. The findings are noteworthy in that they come at a time when 24-hour ABPM is being welcomed as having an important role to play in the diagnosis of hypertension. The recent report from the Subcommittee of Professional and Public Education of the American Heart Association Council on High Blood Pressure Research highlights the importance of using out-of-office measures of BP in making a diagnosis of hypertension. In addition, virtually all national and international guidelines for the diagnosis and treatment of hypertension at least mention the role of ABPM to be discussed in a separate paragraph/section elsewhere in each guideline monograph.

Despite the evidence provided by the current report of Hansen et al and other publications, it is somewhat surprising that 24-hour ABPM has still not become an integral step in making a diagnosis of hypertension. None of the major hypertension guidelines has included ABPM in algorithms for diagnosing hypertension, leaving the role of ABPM to be discussed in a separate paragraph/section elsewhere in each guideline monograph.
making a diagnosis in patients with uncomplicated mild to moderate essential hypertension initially detected by routine office readings. Using an evidence-based approach, the CHEP Task Force concluded that there were sufficient data available to recommend a greater use of ABPM and self-BP monitoring in routine clinical practice. In addition, inclusion of ABPM and self-BP monitoring into the main diagnostic algorithm would facilitate a more rapid diagnosis of hypertension and reduce the risks of having patients being left untreated for prolonged periods while a diagnosis of hypertension was being made using repeated office readings.

Resistance to abandoning the mercury sphygmomanometer as the gold standard for diagnosis hypertension has been quite remarkable. One can only hope that reports such as that of Hansen et al14 will finally lead to the inclusion of 24-hour ABPM into the diagnostic algorithm in all national and international guidelines for managing hypertension. Only then will the prescient conclusions made by Sokolow et al2 finally lead to the inclusion of 24-hour ABPM into the diagnostic algorithm in all national and international guidelines for managing hypertension. Only then will the prescient conclusions made by Sokolow et al2 almost 40 years ago have received appropriate recognition:

“Portable recorder measurements should aide in selecting patients likely to benefit from antihypertensive therapy and in guiding such treatment.”

References

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