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Opponent’s comments

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Dr Agarwal presents a passionate argument for the use of ambulatory blood pressure monitoring (ABPM), but fails to address the added value of this measurement, or the practical use of ABPM beyond research studies and trials. ABPM provides more information on BP than home monitoring, single clinic readings or even the ‘before and after’ readings that we routinely collect on dialysis. The additional detail that ABPM and, to a lesser extent, home readings provide clearer associations between blood pressure parameters and outcomes in the dialysis population. This reflects the repeated measurements and is a strength of ABPM in epidemiological studies and clinical trials [1]. However, it does not necessarily help in the management of individual patients. Dr Agarwal argues that the pattern of change in interdialytic BP demonstrated by ABPM identifies patients with large fluid gains. While I—and I suspect everyone else—would agree that this is a major problem, with proven links to adverse outcomes [2], I suspect that no one would advocate the use of ABPM to direct fluid management—preferring anything from weight and clinical assessment to lung ultrasound and echocardiography.

One of the issues about focussing on a single technique or measurement is that it detracts from the bigger picture. Dr Agarwal argues that failure of the AURORA trial to identify
blood pressure as a significant risk factor was due to the fact that a single clinical measurement was used rather than ABPM. While that may well be true, the point was that when analysed in a pool of risk factors and biomarkers, blood pressure may have limited impact. This point is illustrated by trials of ABPM in CKD, where the significance of ABPM on outcomes is lost when other parameters are entered into multivariate analyses [3].

Although home monitoring was not part of the original debate it provides a useful common ground—providing additional information on interdialytic blood pressures and empowering the patient in the management of their own disease. Dr Agarwal did not cover the practical issues of establishing ABPM monitoring in a dialysis setting, such as the frequency of measurements and targets, and the logistics of providing a service beyond a research-focused clinical setting. In contrast, home monitoring offers a more practical, readily implemented system, with the possible advantage that ‘out-of-hospital’ BP readings may be a better prognostic target [4].

Ultimately, I am sure that Dr Agarwal and I agree that the CV outcomes on maintenance haemodialysis are unacceptably poor, and that more detailed information on BP control would be useful, as would lung ultrasound, echocardiography, and other measures of fluid balance and cardiac function. Home monitoring does more to empower and engage the patients than ABPM, which is yet more mechanized, remote monitoring in an already machine-dominated life. However, the subject of the debate was whether ABPM should be a routine part of our current management of haemodialysis patients, providing added value to the management of individual patients. To my mind, there is insufficient evidence to support this view, in the management of complex haemodialysis patients, with limited resources, at least until an intervention based on ABPM is shown to alter outcomes for the better.

REFERENCES


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Con: Ambulatory blood pressure measurement in patients receiving haemodialysis: a sore arm and a waste of time?

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ABSTRACT

Ambulatory blood pressure monitoring (ABPM) has become popular in the investigation and management of patients with essential hypertension. In patients receiving haemodialysis, ABPM identifies patients who may fare worse in the long term. However, the available studies are small, and when conventional risk factors are included, there is no added value to ABPM over conventional BP measurements. In haemodialysis, ABPM remains an experimental investigation, and in the absence of specific, evidence-based targets for blood pressure in this population, it would be better to invest in large-scale trials to provide specific blood pressure targets and strategies, rather than concentrating on an alternative technique for blood pressure measurement.

Keywords: ambulatory monitoring, cardiovascular risk, haemodialysis, hypertension