

## **SIGNIFICANCE STATEMENT**

Evidence on the utility of ambulatory BP monitoring for risk prediction has been scarce in patients on hemodialysis, and findings are inconclusive. In addition, in cardiac diseases commonly found among patients on dialysis, such as heart failure and atrial fibrillation, some previous studies have found that systolic BP and pulse pressure have inverse or nonlinear (U-shaped) associations with mortality. This study provides evidence for the nonlinear (U-shaped) association between peripheral ambulatory systolic BP or pulse pressure and mortality in patients on hemodialysis. Furthermore, it suggests that the associations can be explained by underlying cardiac disease. These findings support the importance of considering the comorbidity of cardiac disease when treating hypertension in patients on hemodialysis.