

Erratum to: Is ambulatory blood pressure monitoring useful in patients with chronic autonomic failure?

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The original version of this article unfortunately contained mistakes. Sections “Abstract” and “Conclusions” should read:

Abstract Management of blood pressure (BP) abnormalities in patients with autonomic failure is usually based on office BP readings. It is uncertain whether office readings reflect actual BP's during a typical day. Therefore, in 45 patients with autonomic failure we compared office BP values during a tilt test with those captured on a 24-h BP ambulatory monitor. Office BP values while supine predicted well the level of nighttime hypertension. However, in only 33 % of patients office values during tilt test accurately reflected hypotension during a typical day. Therefore, BP ambulatory monitoring is useful to gauge the true severity of hypotension in patients with autonomic failure.

Conclusions

Here we show that in patients with chronic autonomic failure office readings of blood pressure in the supine

position are a good predictor of blood pressure throughout the night. In contrast, blood pressure readings during an office tilt test, accurately predict the severity of hypotension during a typical day only in one-third of the patients. These findings suggest that relying on clinic blood pressure values in the management of patients with chronic autonomic failure may result in under or over treatment.

In most cases when the severity of OH was underestimated during an office tilt, patients had severe supine hypertension and ambulatory monitoring picked up the presence of post-prandial hypotension after lunch or dinner. The cases when OH was worse on office tilt than on ambulatory monitoring may be best explained by the pathophysiology of OH in neurodegenerative diseases. To exacerbate venous pooling during the tilt test, patients stand immobile with their weight supported and avoid engaging the skeletal muscle pumps. This can overestimate the severity of OH in the patients that dutifully rely on physical counter maneuvers to enhance venous return in everyday life. Greater severity of OH with tilt than during ambulatory monitoring also occurred in patients that avoid standing during the day owing to their underlying movement disorder or to prevent experiencing severe OH symptoms.

Finally, the severity of OH is also dependent on small shifts in fluid balance, which occur throughout the day. A limitation with the currently available ambulatory monitors is their inability to detect posture. Hypertension when supine frequently occurs before treatment with anti-hypotensive drugs, but these agents further exacerbate it [5] and hasten the progression of cardiovascular damage [3]. Based on these findings, in patients with autonomic failure, we recommend that in addition to clinic readings, blood pressure be assessed by ambulatory monitoring. Emphasis should be placed on obtaining additional BP readings,

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particularly in patients who describe the worsening of orthostatic tolerance at predictable times during the day, such as after meals. A recent review article reporting the similarities of ambulatory and office BP readings during an

active stand test also supports this stance [6]. Ambulatory monitoring is also useful to time precisely the use of short acting pressor agents when OH is severe in patients who tend to remain seated for most of the day.