

Western University

Scholarship@Western

Department of Medicine Publications

Medicine Department

5-1-2012

Pseudohypertension

J. David Spence

Robarts Research Institute, jdspence@uwo.ca

Follow this and additional works at: <https://ir.lib.uwo.ca/medpub>

Citation of this paper:

Spence, J. David, "Pseudohypertension" (2012). *Department of Medicine Publications*. 328.
<https://ir.lib.uwo.ca/medpub/328>

Letter to the Editor

Letters to the Editor will be published, if suitable, as space permits. They should not exceed 1000 words (typed double-spaced) in length and may be subject to editing or abridgment.

Pseudohypertension

To the Editor:

In their recent Brief Review, Franklin et al¹ misconstrued my message about pseudohypertension. The problem of pseudohypertension has always been a bit difficult to understand.² I agree with them (and, indeed, have said so in this journal)³ that white-coat syndrome is not benign. However, I never said that pseudohypertension is benign. Indeed, I said repeatedly^{4,5} that, because patients with pseudohypertension have stiff arteries, they are at increased risk of cardiovascular events. Franklin et al¹ have focused on the 10-mm Hg diastolic difference between patients with diastolics <90 mm Hg and >100 mm Hg. However, we did not focus on a 10-mm Hg difference; we focused on patients with suspected pseudohypertension, who had diastolic pressures >100 mm Hg in the absence of any evidence of hypertensive end-organ disease.

Importantly, half of such patients over the age of 60 years had a 30-mm Hg difference between the cuff pressure and intra-arterial pressure.⁵ We also suggested using the mean arterial pressure by cuff measurement, which is much closer to the intra-arterial pressure, to diagnose hypertension.⁵ The diagnosis of pseudohypertension is not about withholding therapy; it is about finding the right pressure target for treatment in an elderly patient who reports lightheadedness at pressures that seem reasonable. For the most part, the usefulness of pseudohypertension is clinical, but it also seems likely that the J-shaped curve of risk with lowering of blood pressure may be about patients whose blood pressure is actually much lower than measured.

If a patient with a cuff pressure of 160/80 mm Hg actually has a true intra-arterial pressure of 170/50 mm Hg, that could be a problem for myocardial perfusion (because most myocardial blood flow occurs during diastole).

Disclosures

None.

J. David Spence

*Stroke Prevention and Atherosclerosis Research Centre
Robarts Research Institute
University of Western Ontario
London, Ontario, Canada*

1. Franklin SS, Wilkinson IB, McEniery CM. Unusual hypertensive phenotypes: what is their significance? *Hypertension*. 2012;59:173–178.
2. Spence JD. Pseudo-hypertension in the elderly: still hazy, after all these years. *J Hum Hypertens*. 1997;11:621–623.
3. Spence JD. White-coat hypertension is hypertension. *Hypertension*. 2008; 51:1272.
4. Spence JD. Pseudohypertension. In: Laragh JH, Brenner BM, eds. *Hypertension: Pathophysiology, Diagnosis and Management*. New York, NY: Raven Press; 1995:1929–1937.
5. Spence JD, Sibbald WJ, Cape RD. Direct, indirect and mean blood pressure in hypertensive patients: the problem of cuff artifact due to arterial wall stiffness, and a partial solution. *Clin Invest Med*. 1979;2:165–173.