Aortic Pulse Wave Velocity May Have Prognostic Value Not Just for Hypertension but Also for Abdominal Aortic Aneurysms

To the Editor:

A recent systematic review concluded that the carotid-femoral pulse wave velocity (cfPWV) is associated with hypertension but not with other vascular risk factors.1

We recently demonstrated that cfPWV is decreased in patients with abdominal aortic aneurysms (AAAs).2 In normal aortas, the propagation of the pulse wave is relatively uniform along the wall. Because of the AAA, the smooth continuity of the aorta is distorted, and pulse waves propagate more slowly. After the resection of the AAA and the placement of a bifurcated graft, cfPWV values improved (from 7.84±1.85 m/s preoperatively to 10.08±1.85 m/s 6 months postoperatively; \( P<0.0001 \)).2

The results of our pilot study2 and of an experimental model3 suggest that cfPWV may be a marker of aortic wall instability or AAA rupture risk, although these results need to be confirmed. Therefore, cfPWV may be influenced by aortic structure (eg, AAA), as well as by hypertension and age.1

Disclosures

None.

Kosmas I. Paraskevas
Department of Vascular Surgery
Red Cross Hospital
Athens, Greece

Zennon S. Kyriakides
Second Department of Cardiology
Red Cross Hospital
Athens, Greece

Dimitri P. Mikhailidis
Department of Clinical Biochemistry
( Vascular Disease Prevention Clinics)
Royal Free Hospital Campus
University College London Medical School
University College London
London, United Kingdom


(Hypertension. 2010;55:e22.)
© 2010 American Heart Association, Inc.
Hypertension is available at http://hyper.ahajournals.org

DOI: 10.1161/HYPERTENSIONAHA.110.150110
Aortic Pulse Wave Velocity May Have Prognostic Value Not Just for Hypertension but Also for Abdominal Aortic Aneurysms
Kosmas I. Paraskevas, Zenon S. Kyriakides and Dimitri P. Mikhailidis

Hypertension. 2010;55:e22; originally published online March 29, 2010;
doi: 10.1161/HYPERTENSIONAHA.110.150110

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://hyper.ahajournals.org/content/55/6/e22