Letter to the Editor

Reliability of the Measurement of the Flow-mediated Dilation of the Brachial Artery by Ultrasonography

To the Editor,

We read with great interest the article by Meirelles et al[1], on the reliability of the measurement of the flow-mediated dilation of the brachial artery by ultrasonography in 13 apparently healthy, non-smoking volunteers. In this study, the authors were careful to use the standard methodology and the recommendations of the International Brachial Artery Reactivity Task Force (2002). However, we consider that automatic, continuous, real-time measurement, from the start of cuff release until the third minute after decompression, with simultaneous ECG tracing is the most adequate recording method for this type of study[2,3]. On the other hand, the individual numerical values of the brachial artery diameters must also be informed for their appropriate correction with exclusion of diameters < 2.5 mm or > 5.0 mm.

Although significant information can be acquired through the analysis of the Bland-Altman charts, a study with a larger sample size would be interesting[4].

We agree with the clinical relevance of this method in the assessment of endothelial function in individuals with risk factors[5], early atherosclerotic disease and in the evaluation of cardiovascular pharmacological therapy. Recent studies have also demonstrated an association of functional alterations in the vascular endothelium with genetic markers (polymorphisms) of the components of the endothelial nitric oxide system and NO-cyclic GMP pathways in the vascular endothelium of hypertensive individuals and controls[6].

Nonetheless, it is necessary to adopt national standardization of the terminology used to describe this method used worldwide since its first description by Celermajer et al[7] in 1992.

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