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Description of Doppler waveforms to detect lower extremity peripheral artery disease

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Title: Description of Doppler waveforms to detect lower extremity peripheral artery disease.

A letter to the editor regarding the recently published paper entitled: « How sensitive and specific is continuous-wave Doppler for detecting peripheral arterial disease in people with and without diabetes? A cross-sectional study.»

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Dear Editor,

We were pleased to read the paper from Tehan *et al.* entitled. "How sensitive and specific is continuous-wave Doppler for detecting peripheral arterial disease in people with and without diabetes? A cross-sectional study."¹ It is well known that international guidelines suggest the use of Doppler waveform analysis to detect lower extremity peripheral artery disease. In this paper, the authors suggest that the use of Continuous Doppler Waveforms (CWD) could be useful to detect lower extremity peripheral artery disease. We totally agree with the conclusions of the authors but a major issue is that there is no standard about the description of Doppler waveforms². Indeed, Tehan *et al.* decided to classify Doppler waveforms in two categories: multiphasic (i.e. normal) or monophasic (i.e. pathological). Previous papers have shown that there is a huge heterogeneity in the description of the Doppler waveforms among sonographers or physicians or students and even in a same country³⁻⁵. Nicolaidis and Yao have found that similar words such as biphasic or monophasic used in different papers do not have the same graphical representation⁵. Therefore, we would like to invite Tehan and colleagues to present the arterial Doppler waveforms graphical representation that they have used in their paper in order to use it in future research studies and in clinical practice.

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