Vascular Risk, Diabetes and the Ankle-Brachial Index

Riesgo vascular, diabetes e índice tobillo-brazo

To the Editor,

We have read with great interest the article by Baena-Díez et al. published in *Revista Española de Cardiología*.[1] In an extensive population-based study, the authors' objective is to determine the usefulness of the ankle-brachial index (ABI) in reclassifying low or intermediate cardiovascular risk patients to a higher category. Their main conclusion is that ABI reclassifies a substantial proportion of patients towards the high-risk category and that this is especially the case in women and by comparison with REGICOR function scores. While we do not wish to cast doubt on this conclusion, we believe that including patients with diabetes may have somewhat distorted their findings. The presence of patients with diabetes (57 of 204 patients with ABI <0.9) could have increased the proportion of those with ABI <0.9 following statin, antihypertensive drug or antiplatelet agent regimens (as well as hypoglycemic treatments), and led to the percentage of patients with LDL <100 mg/dL in the low ABI group exceeding that found in the normal ABI group. This might explain their greater comorbidity and closer adherence to clinical practice guidelines.[2] Given that patients with diabetes were not excluded, we cannot determine the number of low- or intermediate-risk patients with this problem–and it may well be considerable as one Spanish series reported a median 4.4 SCORE risk for patients with diabetes.[3] Although it can be argued that type 2 diabetes is not an equivalent to coronary disease in northeastern Spain,[4] it is no less certain that diabetes–independently of age and sex–is a predictor of ABI <0.9, as this very study confirms,[5] and that ABI <0.9 appears in ≤27% of ambulatory patients with type 2 diabetes.[6]

In our opinion, except in patients with type 2 diabetes, measuring ABI in low-risk patients is probably of little clinical value and may be inefficient. In our experience, only 2% of patients aged >50 years present ABI <0.9 and are classified as low-risk using the Framingham Risk Score and SCORE risk functions; 4 out of 9 patients with ABI <0.9 present intermittent claudication;[7] in the same series, 33% of patients with ABI <0.9 had intermittent claudication.[5] We share Baena-Díez et al's concern to determine which patients should be prioritized for ABI measurement; perhaps, in those at low- or intermediate-risk, the presence of claudication or diabetes could serve as a guide.

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Available online 17 June 2011

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doi:10.1016/j.rec.2011.03.029

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Vascular Risk, Diabetes, and the Ankle-Brachial Index. Response

Riesgo vascular, diabetes e índice tobillo-brazo. Respuesta

To the Editor,

We would like to thank Valdivieso et al.[1] for their interesting comments on the article by our ARTPER research group published in *Revista Española de Cardiología*.

With regard to a possible distortion of results caused by including patients with diabetes, we do not believe this constitutes an important limitation. The same could be said about the inclusion of patients with high blood pressure who, due to their higher cardiovascular risk, would also more frequently receive antihypertensive treatments and possibly–statins or antiplatelet agents. In fact, risk attributable to high blood pressure is greater than that of diabetes, as the magnitude of the effect does not differ excessively but prevalence is greater.[2,3]

We agree that ankle-brachial index (ABI) measurement is of less clinical interest in low-risk than in intermediate-risk patients. Fortunately, there is a tool (REASON) that prioritizes ABI use, developed by the HERMES group and our own ARTPER group.[4] To date, the Inter-society Consensus (TASC II) recommended measuring ABI in asymptomatic patients aged 50-69 years with diabetes or a history of smoking, at 70 years and older, and when cardiovascular risk is 10% to 20%.[4] The REASON tool–which has been constructed and validated–establishes a score as a function of the risk factor profile to identify patients with a high probability of having ABI <0.9; it has 85.2% sensitivity, similar to TASC II, and 47.2% specificity, greater than TASC II (38.3%).[4] How often ABI should be measured and/or repeated remains to be determined. This will require cohort follow-up studies and the consensus of groups of experts.