Title: Screening for Peripheral Artery Disease Using the Ankle-Brachial Index
Literature surveillance date: August 2023

Recommendation Summary: In 2018, the Task Force concluded that the current evidence was insufficient to assess the balance of benefits and harms of screening for peripheral artery disease (PAD) and cardiovascular disease (CVD) risk assessment with the ankle-brachial index (ABI) in asymptomatic adults (**Grade: I statement**). This recommendation applies to asymptomatic adults without a known diagnosis of PAD, CVD, or severe chronic kidney disease who are with or without risk factors for PAD such as diabetes, smoking, and hypertension.

Research Gaps from Previous Task Force Review: The 2018 recommendation was based on an evidence review with a search through April 2017. The Task Force identified important gaps and recommends research on:

- Whether screening for PAD with the ABI improves clinical outcomes in populations at increased risk for PAD who are not receiving any other CVD interventions;
- The benefits of treating screen-detected PAD; and
- The benefits of screening with the ABI and interventions to stop disease progression in diverse populations (e.g., women, racial and ethnic minorities, persons with low socioeconomic status) and high-risk populations (e.g., persons with diabetes).

Summary of New Evidence: Literature scans conducted in the PubMed database and Cochrane library were limited to English language, core clinical and specialty journals, 2017 to present.

Primary studies

One new RCT addresses screening with the ABI. The population-based Danish Cardiovascular Screening trial (DANCAVAS) includes 45,000 men aged 65 to 74 years and incorporates screening for several different CVD markers, including ABI. This trial is ongoing, but a 2022 publication reports 5-year outcomes, including CVD morbidity, risk of death from any cause, and harms of screening.[1]

One study reports on the accuracy of the ABI as a screening test for PAD. A UK-based study assessed the performance of ABI, along with other methods to detect PAD, in 305 diabetic, asymptomatic patients. The reference standard was a full lower limb duplex ultrasound.[2]

Three studies report on the efficacy of home-based walking interventions. Three RCTs (two in the US, one in the UK) randomized 190–305 patients with PAD (with or without intermittent claudication) to a home-based walking intervention or usual care for three months to one year.[3-5] All studies report changes in ambulation impairment and quality of life and physical functioning scores, and two report adverse events.[4, 5]

References

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