

ANKLE-BRACHIAL INDEX AS A PREDICTOR OF CORONARY ATHERY DISEASE

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AIMS: This study aimed to evaluate the ankle-brachial index (ABI) as a predictor of coronary artery disease (CAD) detected by thallium 201 scintigraphy.

METHODS: This prospective intervention trial gathered 537 diabetic subjects over a 1-year period. This study collected multiple confounding factors (e.g. urine protein, urine microalbumin) of all subjects. Body mass index, age, smoking and sex were also assessed. The level of ABI is a well-known indicator of peripheral arterial occlusive disease (PAOD). Patients were categorized according to their ABI index: group 1 (no PAOD) with $ABI \geq 1.0$ on both sides; group 2 (early PAOD) with $ABI < 0.9$ on one side, ABI between 0.9 and 1.0 on both sides, or $ABI < 0.9$ on both sides. Exercise thallium 201 scintigraphy was examined by intravenous infusion of dipyridamole and recorded as normal or CAD. Fisher exact test and multiple logistic regression models were used to investigate the relationship between CAD with AB, and other predictive factors. All p values produced were two-tailed results, with the significance level set at $p < 0.05$. The odds ratios (OR) and 95% CI adjusted for other potential confounding factors were shown.

RESULTS: This study demonstrated two significant predictors of CAD: ABI [group 2 vs. group 1: $OR=6$ (1.7-2.12); $p=0.005$] and sex [female vs. male: $OR=0.224$ (0.088-0.569); $p=0.0017$]. Proteinuria, age, sex, and smoking were not a significant predictor of CAD in this study population. PAOD defined by ABI was a good predictor of CAD as revealed by exercise thallium 201 scintigraphy.

CONCLUSIONS: In summary, this study revealed ABI was a significant predictor of CAD in diabetes. Female gender was a protective factor against CAD in diabetes. Measurements of the ABI might provide a good prognostic indicator, and should be assessed during screening for atherosclerosis in diabetes.

Key words: ankle-brachial index, thallium 201 scintigraphy, coronary artery disease