ABSTRACT

USEFULNESS OF AN ABNORMAL ANKLE-BRACHIAL INDEX (ABI) FOR DETECTING MULTIVESSEL CORONARY DISEASE IN PATIENTS WITH ACUTE CORONARY SYNDROME IN ADAM MALIK HOSPITAL MEDAN

Background. The presence of peripheral artery disease in patients with coronary artery disease is associated with a poor cardiovascular outcome. However, the majority of affected patients are asymptomatic and the condition is underdiagnosed. The ankle-brachial index (ABI) provides a simple method, non-invasive measurement, shows high sensitivity and specificity in the diagnosis of PAD when its value is ≤ 0.9. Previous studies have shown that the ABI has a high specificity and good negative predictive power with respect to coronary artery disease in patients suspected of having severe coronary involvement.

Aim. The aim of the present work was to determine the role of pathological ABI value in the identification of multivessel coronary disease patients admitted for ACS.

Methods. We analyzed data on ACS patients who underwent catheterization during admission. Patients were diagnosed with multivessel coronary disease if two or more major epicardial vessel or the left main coronary artery, or both, were affected. An ABI ≤ 0.9 or > 1.4 was considered abnormal. The relationship between abnormal ABI and severity coronary artery disease was analyzed.

Results. The study included 65 patients with a mean age 55.05 years. Of these, 53 had multivessel disease (81.5%). Compared with those without multivessel disease, these patients had abnormal ABI's value (56.67% vs 16.67%, p value 0.012 OR= 6.52; 95% confidence interval 1.3-32.7) and lower EF (46.9% vs 57.01%, p value 0.004). Multivariat analysis showed that the presence of an abnormal ABI was associated with an increase risk of multivessel disease (p value 0.023 OR= 6.522; 95% confidence interval 1.3-32.7)

Conclusions. This study showed that an abnormal ABI was independently associated with the risk of multivessel coronary artery disease in patients with acute coronary syndrome.

Keyword. PAD, abnormal ABI, ACS, coronary angiografi, multivessel coronary artery disease.