Detecting myocardiac ischemia in patients with type 2 diabetes mellitus with and without Podiatric abnormalities using dobutamine stress echocardiography and influencing factors

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Abstrak

The prevalence of coronary heart disease in the adult population with diabetes mellitus (DM) is far greater (55%) than in the general public (2-4%). There is an acknowledged correlation between type I hidden ischemia and the incidence of myocardiac infarct. There needs to be a way to determine the presence or absence of ischemia. An alternative examination method is the Dobutamine Stress Echocardiography (DSE).

This study was conducted at the Metabolic-Endocrine and the Cardiology Out-Patient Clinics of the Department of Internal Medicine ofCipto Mangunkusumo Central Public General Hospital, Jakarta, from February to August 2001.

The aim of the study is to detect undetected myocardiac ischemia using the electrocardiography among patients with type 2 diabetes mellitus and podiatric abnormality and testing the correlation between certain factors (sex, age, body mass index, lipid profile, fasting blood glucose, post prandial blood glucose, HbAlc, peripheral vascular disease, smoking, retinopathy, and neuropathy) with myocardiac ischemia.

Methodology: The study was designed as a comparative study of the incidence of myocardiac ischemia between type 2 diabetes mellitus patients with and without podiatric abnormalities. The sample consisted of 28 patients. Samples underwent the dobutamine stress echocardiography

Results: dobutamine stress echocardiography examination using Apogee on 14 patients with type 2 diabetes mellitus with podiatric abnormality demonstrated a positive ischemic response in 4 people (28.6%). No positive findings were found in type 2 diabetes mellitus patients without podiatric abnormality.

Conclusion: 1. DSE could detect myocardiac ischemia in 28.6% of type 2 diabetes mellitus undetected with electrocardiography. 2. Other factors that influenced a positive dobutamine stress echocardiography were autonomic neuropathy, diabetic retinopathy, the duration of diabetes mellitus, fasting blood glucose, and podiatric abnormality.