CORRELATION BETWEEN EPICARDIAL FAT PAD THICKNESS AND ACUTE CORONARY SYNDROME

ABSTRACT

BACKGROUND: Visceral adipose tissue (VAT) has significant association with development of metabolic syndrome and coronary artery disease. It could be due to release of free fatty acids which causes direct lipotoxicity and also due to release of various proinflammatory and proatherogenic cytokines that affect endothelial function. Epicardial fat which is the visceral fat deposit located between the heart and the pericardium correlates well with the presence of visceral adipose tissue.

AIM OF THE STUDY: To evaluate the correlation between epicardial fat pad thickness measured by echocardiography and incidence of acute coronary syndrome.

METHODOLOGY: This is a case control study which include a study group of 53 patients admitted with acute coronary syndrome at Thanjavur Medical College and a control group of 53 peoples who are not a known case of CAD (Coronary Artery Disease). Epicardial fat pad thickness was measured using transthoracic echocardiogram.

RESULTS: Increased epicardial fat pad thickness was found to be significantly associated with acute coronary syndrome. Older age group, increased waist hip ratio, Body mass index, increased fasting blood sugar level and increased total cholesterol level were found to be significantly associated with acute coronary syndrome.
CONCLUSION:

Epicardial fat pad thickness has a positive correlation with metabolic syndrome and cardiovascular risk and is a more sensitive assessment of body fat distribution. Transthoracic echocardiography provided a relatively inexpensive means to measure and quantify epicardial fat. It is not a time consuming and only adds minimally to the time required for regular echocardiographic procedure. It can used for screening of metabolic syndrome along with other routine tests like body mass index and waist hip ratio.

KEYWORDS

Epicardial fat thickness, echocardiography, ACS and epicardial fat, Visceral adipose tissue, India