

عنوان مقاله:

Total cholesterol/high-density lipoprotein cholesterol and low-density lipoprotein cholesterol/high-density lipoprotein cholesterol as predictors of coronary artery calcification assessed by multidetector computed tomography coronary angiography

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نویسندگان:

Elshaimaa Aly M. Elsadek Seaoud - *Department of Cardiology, School of Medicine, Zagazig University, Zagazig, Egypt*

Mohamed Ibrahim Amin - *Department of Cardiology, School of Medicine, Zagazig University, Zagazig, Egypt*

Mohamed Salah Abdelbasit - *Department of Cardiology, School of Medicine, Zagazig University, Zagazig, Egypt*

خلاصه مقاله:

BACKGROUND: Coronary artery calcification (CAC) is an important marker of total burden of coronary atherosclerosis. Furthermore, it is a measure of subclinical atherosclerotic disease that correlates well with the cardiovascular risk. The aim of our study was to determine the role of the different lipid parameters in prediction of calcification in coronary arteries using multidetector computed tomography (MDCT). **METHODS:** This study was conducted on ۱۲۰ patients presenting to the clinic with typical or atypical chest pain or dyspnea on exertion, or equivocal stress test results along with standard cardiac risk factors; they all underwent computed tomography (CT) coronary angiography. A total calcium score was determined by summing individual lesion scores from each of our anatomic sites: left main (LM), left anterior descending (LAD), left circumflex (LCX), and right coronary artery (RCA). The amount of calcium present in the coronary arteries was scored according to Agatston score, and patients were divided into ۲ groups based on absence (group I) and presence (group II) of CAC. Clinical characteristics, lipid ratios, and a full blood count were calculated and compared between both groups. **RESULTS:** Mean and standard deviation (SD) for age of group I was 52.4 ± 8.4 years, while that of group II was 53.7 ± 7.9 ($P > 0.005$). Patients in group II had a higher total cholesterol (TC), low-density lipoprotein (LDL), TC/high-density lipoprotein cholesterol (HDL-C) and LDL/HDL-C ratio, and lower HDL levels. TC/HDL ratio and LDL/HDL ratio were found to be good predictors of calcium using a regression analysis model. Finally, at a cut-off value of ≥ 3.108 , LDL/HDL ratio showed a sensitivity of ۵۸.۸% and specificity of ۸۴.۶% in prediction of coronary calcium, while TC/HDL ratio ≥ 4.742 showed a sensitivity of ۶۰.۳% and specificity of ۸۸.۵%. **CONCLUSION:** Amongst the different lipid parameters, TC/HDL-C and LDL/HDL ratio were found to be good predictors of presence of CAC in coronary arteries.

کلمات کلیدی:

Dyslipidemia, Atherosclerosis, Coronary Artery Disease

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