

Obesity and Coronary Artery Disease as Observed by Computed Tomography Coronary Angiography (CTCA).

Ghassan Zaid¹, Abdel-Raof zeina², Uri Rosenschein¹

¹ Cardiology, ² Radiology, Bnai-zion medical center, Haifa, Israel

Backgrounds: Overweight is thought to be one of the risk factors for the Coronary Artery Disease (CAD). Non-invasive CTCA with high negative predictive value could be excellent modality for detection of CAD in different weight categories.

Objective: To assess the rule of obesity on the incidence of CAD using CTCA

Methods: Subjects without evidence of CAD who had undergone CTCA for the early detection of CAD were categorized according to their body mass index (BMI) in 3 groups; <25 (group-I), 25 to <30 (group-II), and ≥ 30 kg/m² (group-III), matched in baseline characteristics. In each group the incidence of CAD, number of diseased coronary segments, number of segments with significant (diameter stenosis > 50%) and non-significant (diameter stenosis $\leq 50\%$) disease and calcium score were calculated.

Results: CTCA finding of 148 subjects; 38 in group-I, 69 in group-II, and 41 in group-III were analyzed. Mean calcium score was significantly higher in group-II and III than in group-I; 187, 176 and 96 respectively ($p = 0.048$). The number of disease segments per subject was 3.7, 4.8, 5.1, in group-I, II, III respectively ($p = 0.77$). The number of segments with non-significant stenosis per subject was 3, 3.9, 3.9 ($p = 0.78$) and with significant stenosis was 0.66, 0.9, 1.2 in each group respectively ($p = 0.008$)

Conclusion: Our CTCA data showed that obesity seems to be an independent risk factor for CAD represented by the extent of calcium score and significant disease.