

## **Non Obstructive Coronary Artery Disease upon Computed Tomography in Patients with Acute Chest Pain**

*Beigel, Roy<sup>1</sup>; Brosh, Sella<sup>1</sup>; Goitein, Orly<sup>2</sup>; Guttman, Einat<sup>1</sup>; Segev, Amit<sup>1</sup>; Oeiru, Dan<sup>1</sup>; Konen, Eli<sup>2</sup>; Gerber, Yariv<sup>3</sup>; Hod, Hanoch<sup>1</sup>; Matetzky, Shlomi<sup>1</sup>*

*<sup>1</sup>Sheba Medical Center, The Leviev Heart Center, Tel Hashomer, Israel; <sup>2</sup>Sheba Medical Center, Radiology, Tel Hashomer, Israel; <sup>3</sup>School of Public Health, Sackler Faculty of Medicine, Tel Aviv University, Epidemiology and Preventive Medicine, Tel Aviv, Israel*

Background: Multi-detector computerized tomography (MDCT) has emerged as an efficient tool for detection of significant coronary disease and assessment of patients with acute chest pain. MDCT may detect premature, non-obstructive atherosclerotic lesions which otherwise would have not been detected upon functional cardiac imaging tests. There is scarce data regarding the clinical significance of these lesions. In this study we prospectively analyzed the long term outcome of patients admitted to our chest pain unit (CPU) with findings of non obstructive coronary artery disease (CAD) in MDCT.

Methods: The study comprised 959 patients without known CAD admitted to the CPU and evaluated by MDCT for complaints of acute chest pain. Studies were classified as: normal; Non obstructive CAD (defined as any narrowing < 50% diameter stenosis); obstructive CAD (defined as narrowing of  $\geq 50\%$  diameter stenosis) and non interpretable. Patients were followed up for a minimum of 1 year. We compared the outcome of patients with non-obstructive CAD and those with normal coronaries upon MDCT with regard to MACE (death, re-ACS, and revascularization).

Results: Comparing patients with non-obstructive CAD (n=312) vs. patients with normal coronaries (n=545) upon MDCT, the aforementioned were older, more likely to be male, dyslipidemic and hypertensive. During a median follow up of 2.2 ( $\pm 1.04$ ) years MACE was low and not different between the 2 groups (4.2% vs. 2.1% p=0.09) rates of death, repeated ACS, and need for revascularization were also equally low between the 2 groups.

Conclusions: Patients presenting with acute chest pain and found to have non-obstructive CAD upon MDCT have a benign clinical outcome as those with normal findings upon MDCT.