

### Diagnostic Accuracy of Multidetector 64-Slice Computed Tomographic Angiography in Assessing Anomalous Coronary Arteries

*Jabara, R<sup>1</sup>; Gadesam, R<sup>2</sup>; Frohwein, S<sup>2</sup>*

<sup>1</sup>Hadassah University Hospital, Jerusalem, Israel; <sup>2</sup>Saint Joseph's Hospital, Atlanta, USA

**Objective:** To evaluate the diagnostic accuracy of 64 slice computed tomographic angiography (CTA) in assessing anomalous coronary arteries compared to invasive coronary angiography.

**Methods:** A total of 12 anomalous coronary arteries were evaluated in 10 consecutive patients. The CTA scan protocol used 64x0.5mm slice collimation, 0.33s gantry rotation time during simultaneous ECG gating and was compared to invasive angiography.

**Results:** Three right and nine left anomalous coronary vessels were detected. Among the left anomalous coronaries; 2 left main, 2 left circumflex arose from the right cusp, and 3 LAD's originated from the proximal portion of RCA. Two right coronary arteries originated from the left cusp and another one had an acute angle take off. Interestingly one patient presented with acute inferior MI and showed anomalous left main by both modalities but the noncompressibility of the vessel and its course beneath the pulmonary artery was shown only by multiplanar reconstruction on CTA. Defining anatomical course in relation to great vessels of these anomalous arteries was possible only by CTA. Six out of ten patients underwent bypass surgery due to the course between the great vessels, slit like ostial opening and dynamic compression in the anomalous vessel.

**Conclusions:** CTA is the imaging modality of choice in the evaluation of anomalous coronary arteries due to the ability not only to describe the course of the vessel but to noninvasively evaluate the degree of obstructive coronary artery disease.

