



Current Issue



Browse Issues



Search



About this Journal



Instruction to Authors



Online Submission



Subscription



Contact Us



RSS Feed

Acta Medica Iranica

2009;47(4) : 85-90

Agreement Determination between Coronary Calcium-Scoring and Coronary Stenosis Significance on CT-Angiography

A. Arjmand Shabestari, S. Akhlaghpour, M. Shadmani, M. Ebrahimi, M. Shakiba, M. Shojaei Moghadam

Abstract:

Background/Objective: The most important lesions in coronary artery disease (CAD) are coronary artery plaques, many of which are calcified. Multi-slice spiral CT (MSCT) scanners can concurrently perform coronary calcium scoring (Ca-Score) as a predictor of CAD and coronary CT-angiography (CCTA) as the determining factor in therapeutic decision-making. We aimed to determine the agreement of a Ca-Score more than 100 (based on Agatston technique) with coronary artery stenosis significance on CCTA. Patients and Methods: Using ECG-gated MSCT, 65 patients who were referred for CCTA were assessed both for their Ca-Score and a significant ($\geq 50\%$ diameter reduction) coronary stenosis, simultaneously. Their total Ca-Score were classified in three groups (a-0, b-less than 100, and c- ≥ 100). The severity of coronary stenosis was categorized to further three groups (1- lack of stenotic lesion, 2- presence of non-significant stenosis, and 3-presence of significant stenosis). Results: Of 65 patients referred for CCTA, 42 (64.61%) had no CAD, 8 (12.3%) had non-significant lesions, and 15 (23.09%) had significant stenoses. Forty-three (66.2%) out of 65 subjects had a zero, 14 (21.5%) had scores <100 , and 8 (12.3%) had ≥ 100 Ca-Score. In the first group (Ca-score = 0), only one had significant stenosis; while 50% of the patients in the second group (Ca-score < 100) and 87.5% from the third group (Ca-score of ≥ 100) had significant stenosis. Significant coronary stenosis has a moderate-to-good agreement with a Ca-Score of 100 or higher, compared to those with a Ca-Score of less than 100, and this was statistically significant ($P < 0.0001$). Conclusion: In patients with a calcium score of 100 or more, performing CCTA may be advisable to assess the likelihood of significant CAD.

Keywords:

Computed Tomography (CT) . calcium-scoring . coronary artery stenosis

TUMS ID: 2325

Full Text HTML  Full Text PDF  244 kB

top ▲

[Home](#) - [About](#) - [Contact Us](#)

TUMS E. Journals 2004-2009
Central Library & Documents Center
Tehran University of Medical Sciences

Best view with Internet Explorer 6 or Later at 1024*768 Resolutions