Role of multidetector computed tomography angiography in evaluation of anatomical variations in the coronary arteries

Thesis

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Abstract

Although the majority of these anomalies were detected incidentally during coronary CT angiography, awareness of them is clinically important for the appropriate management of cardiac patients.

Multidetector CT with rapid coverage, thin collimation, faster gantry rotation, overlapping reconstructions with ECG gating and advanced postprocessing techniques enables perfect noninvasive delineation of complex coronary artery anatomy, variations and congenital anomalies of coronary arteries. That's why CCTA has gained much a wider application area in the field of cardiovascular imaging after improvement of the radiation dose and is now the primary imaging modality for the evaluation and diagnosis of CAAs..

The objective of this study was to assess the prevalence of the different types of coronary artery anatomical variants and primary congenital anomalies using the multislice CT coronary angiography as a non invasive imaging tool.

We studied 1000 patients referred to us to detect or exclude coronary artery disease by using multislice computed tomography evaluation of the coronary arteries.

Our study showed that the incidence of these variations and anomalies in our population is close to that reported in other populations and that coronary artery anatomical variations are almost benign entities with no haemodynamic significance, while some congenital anomalies may interfere with adequate myocardial blood supply causing variable ischemic symptoms.

Keywords: CCTA-CT-ECG-CAAS- ALCAPA

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