Feasibility and accuracy of 64-row MDCT coronary imaging from a centre with early experience: a review and comparison with established centres.

Ong K, Chin SP, Chan WL, Liew CK, Seyfarth MT, Liew HB, Rapaee A, Sim KH.
Department of Cardiology, Sarawak General Hospital.

Abstract

The accuracy of multi-detector computed tomographic (MDCI) coronary angiography (CTA) is dependant on image quality as well as the experience of the operator. Established centers have reported negative predictive values of over 95%. The aim of our study was to investigate the accuracy and feasibility of CTA for the assessment of haemodynamically significant coronary stenosis in a center with very early experience (<6 months) utilizing the improved spatial and temporal resolutions of the latest generation 64-row MDCI scanner. One hundred and twenty eight patients (93 male, 35 female; mean age 56.2 +/- 9.5 years) with suspected or known coronary artery disease underwent both CIA and conventional coronary angiographv (CCA). The sensitivity, specificity, positive (PPV) and negative (NPV) predictive values for stenoses > or =50% by CIA compared to CCA were 70%, 97%, 70% and 97% respectively. Evaluation of main and proximal segments in patients with good quality images (78% of patients) produced values of 94%, 95%, 74% and 99% respectively. The improved spatial and temporal resolutions of 64-row MJ) CT provided a high negative predictive value in assessing significant coronary artery stenosis even in a centre with very early experience. However, new centers embarking on CTA might not be able to reproduce the results reported by more experienced centers.