Coronary artery calcium determined by electron beam computed tomography for predicting angiographic coronary artery disease in moderate to high risk Chinese patients.

劉如濟

Lung-Ching chen;Philip Yu-An Ding;Jaw-Wen Chen;Mei-Han Wu;Ju-Chi Liu;Gong-Yau Lan;Ming-Sheng Chern;Cheng-Yen Chang;Mau-Song Chang

摘要

Abstract

The aim of this study was to evaluate the prevalence of coronary calcification among moderate- to high-risk Chinese patients and to evaluate the ability of the coronary calcium score determined by electron beam computed tomography (EBCT) to predict angiographic coronary artery disease in this population. We enrolled 163 consecutive patients and analyzed their cardiovascular risk factors, coronary calcium scores and coronary angiogram results. One hundred and twenty-five patients (76.7%) had a positive EBCT scan result (coronary calcium score >0). The prevalence of calcification and the calcium scores showed a graded relation to the number of cardiovascular risk factors and age ($p < 0.001$ for trend). Coronary calcium scores showed statistically significant differences between patients with angiographic evidence of coronary artery disease and patients with normal coronary angiography ($p < 0.05$), but could not differentiate between patients with significant and insignificant coronary artery disease. Receiver operating characteristic curve analysis showed that a coronary calcium score >5 predicted angiographic coronary artery disease with 93% sensitivity and 86% specificity (area under the curve 0.95 ± 0.019). Multivariate analysis showed a coronary calcium score >5 to be the strongest independent predictor of angiographic coronary artery disease (odds ratio 120.7, 95% confidence interval 21.7-671.4; $p < 0.001$). Coronary calcium score determined by EBCT appears to have a similar predictive value in Chinese patients as it does in other ethnic populations that have been reported to date.

.

..