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DIAGNOSTIC ACCURACY AND INFLUENCE FACTORS OF MUTISLICE CT IN WOMEN VERSUS MEN WITH SUSPECTED OR PROVEN CORONARY ARTERY DISEASE

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Objective The aim of the study was to investigate the diagnostic value and its influence factors of 64-multislice CT (MSCT) in the detection of women versus men CAD.

Methods We enrolled 396 patients between Jan 2007 and Feb 2011 with suspected or proven coronary artery disease successively underwent MSCT followed by coronary angiography within 1 month. Diagnsotic accuracy of MSCT compared with that of conventional coronary angiography was determined on a per-segment, per-vessel, and per-patient basis. We calculated the sensitivity, specificity, negative predictive value, positive predictive value and accuracy to determine the usefulness of MSCT for assessing stenosis. Analysis of the influence factors of diagnostic accuracy in MSCT in women versus men CAD using multivariate unconditional logistic regression.

Results (1) On a per-patient basis, the positive predictive value (91% vs 97%, p<0.05), diagnostic accuracy (87% vs 93%, p<0.05) of MSCT in detecting CAD were lower in women. On a per-segment basis, the negative predictive value (87% vs 83%, p<0.05) and diagnostic accuracy (82% vs 79%, p<0.05) of MSCT in detecting CAD were higher in women. (2) In women, the influence factors of diagnostic accuracy in MSCT detecting CAD included typical angina (OR 4.94, 95% CI 1.16 to 20.92, p<0.05), larger left atrium (OR 4.87, 95% CI 1.17 to 20.19, p<0.05), multi-vessel coronary lesions (OR 31.34, 95% CI 3.6 to 272.6, p<0.05) and non-calcified plaque (OR 4.96, 95% CI 1.01 to 24.51, p<0.05). (3) In men, the influence factors of diagnostic accuracy in MSCT detecting CAD was non-calcified plaque (OR 9.11, 95% CI 1.08 to 76.79, p<0.05).

Conclusions The positive predictive value and diagnostic accuracy of MSCT in detecting CAD were lower in women. In women, typical angina, larger left atrial sise, multi-vessel coronary lesions and non-calcified plaque were the independent influence factors associated with diagnostic accuracy in MSCT detecting CAD, which can guiding the selection of MSCT in women suspected CAD.