

中文題目：高敏感度心臟肌鈣蛋白 T 對於腎臟功能不全病人的急性心肌梗塞診斷價值

英文題目：Diagnostic value of Acute Myocardial Infarction with High-Sensitivity Cardiac Troponin T Assay in Patients with Renal Insufficiency

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Background: Cardiac troponins are the preferred biomarkers for the diagnosis of acute myocardial infarction (AMI) in the general population. However, the diagnostic value for patients with renal insufficiency is uncertain. The aim of this work was to examine the diagnostic accuracy of high sensitivity cardiac troponin T (hs-cTnT) assay for AMI in patients with renal insufficiency at initial presentation.

Method: We prospectively identified the patients who admitted to coronary care unit of the Chang Gung Memorial Hospital, Keelung from September 1, 2017 to February 28, 2018. Patients who presented with chest pain, dyspnea or cardiac arrest were enrolled. Receiver operating characteristic (ROC) curve were used to examine the diagnostic value of initial hs-cTnT levels and dynamic change at three hours.

Results: Sixty-one patients with initial estimated glomerular filtration rate (eGFR) ≥ 60 mL/min/1.73 m² and 142 patients with eGFR < 60 mL/min/1.73 m² were identified. AMI was finally diagnosed in 54.9% of patients with initial renal insufficiency. The area under the ROC curve of initial hs-cTnT levels for diagnosis of AMI in patients with renal insufficiency was 0.59 (95% CI, 0.49 to 0.69; P=0.116); the relative change after 3 hours was 0.79 (95% CI, 0.471 to 0.87; P<0.001). A cutoff value of 16% had the sensitivity of 72.9%, specificity of 86%, positive predictive value of 93.4% and negative predictive value of 72.4% for AMI prediction in patients with renal insufficiency.

Conclusion: Dynamic change in hs-cTnT levels during 3 hours significantly increased the diagnostic accuracy for AMI in patients with renal insufficiency at initial presentation.