ABSTRACT
DIAGNOSTIC CONCORDANCE BETWEEN NEXT GENERATION AND HIGH SENSITIVE TROPONIN-I IN SUSPECTED ACUTE CORONARY SYNDROME PATIENTS

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Background: Acute coronary syndrome (ACS) is a manifestation of coronary heart disease (CHD), consisting of Unstable Angina and Acute Myocardial Infarction (AMI). Increasing Troponin I (TnI) level is one of criteria for diagnosing AMI. Some methods of TnI assay has been developed, such as high sensitive TnI (*hs*TnI)and next generation TnI (*ng*TnI). The aim of this study was to analyze the diagnostic concordance between *ng*TnI and *hs*TnI in suspected ACS patients.

Methods: This was a cross sectional study done in the Dr. Soetomo Hospital Surabaya in March-July 2016. The 82 patients with *angina pectoris* were examined for *ng*TnI level using Fluorescent Energy Transfer Latex method (Alere Triage MeterPro®) and hsTnI level using Chemiluminescent Enzyme Immunoassay method (Mitsubishi Pathfast®).

Results: Forty four percent subjects were diagnosed as ACS, and 56% were non ACS. There was a significant concordance between *ng*TnI and *hs*TnI results in ACS patients (kappa: 0.738). The sensitivities of *ng*TnI and *hs*TnI level to diagnose IMA with a cut off 0.02 ng/ml were 100%, and the specificities were 56% and 64%, respectively. Correlation analysis between *ng*TnI level and *hs*TnI by Spearman test revealed a correlation coefficient rho (ρ) = 0.826 (p <0.01).

Conclusion & suggestion: There was a diagnostic concordance between *ng*TnI and *hs*TnI in suspected ACS patients. Both TnI assays showed a good value for diagnosing ACS. Further research is needed for analyzing the prognostic value of TnI.

Key words : Troponin I, ACS, FETL, CLEIA