

ABSTRACT**CHANGES ON SERUM TROPONIN T LEVEL BEFORE AND AFTER TAKING STANDARD THERAPY MEDICATION IN HEART FAILURE PATIENTS
(Research at Cardiovascular Department of Dr. Soetomo Teaching Hospital Surabaya)**

Background: Patients presenting advanced heart failure (heart failure NYHA FC III and IV) and positive circulating cardiac troponins were found to be at high-risk cohort. Cardiac troponin T (cTnT) is a sensitive biomarker of myocardial damage especially myocardial necrosis in heart failure. However, there is little information on changes over time in cTnT level during taking standard therapy medication.

Objectives: The aim of this prospective study was to evaluate changes in cTnT levels between before and after taking standard therapy in patients with heart failure and evaluate changes of clinical symptoms improvement between before and after taking standard therapy in patients with heart failure.

Method: cTnT level and clinical syndromes parameter were measured before taking standard therapy on admission and after taking standard therapy at hospital discharge. 30 patients were collected by consecutive sampling in prospective longitudinal study from May – July 2017. Protocol of this study was approved by ethical committee of Dr. Soetomo Teaching Hospital Surabaya. The measured data of serum cTnT and clinical symptoms parameter were analyzed using Wilcoxon sign-ranked test to compare non parametric data and using paired-T test to compare parametric data between before and after taking standard therapy data.

Result: In 30 patients who participated in this study have mean cTnT level before taking standard therapy was $33,48 \pm 31,88$ pg/ml and 93,3% of patients were above the 99th upper reference limit (≥ 12 pg/ml). Mean cTnT level after taking standard therapy was $46,32 \pm 52,68$ pg/ml. We compared cTnT level before and taking standard therapy and changes on serum cTnT level was not significant ($p=0,318$). In clinical symptoms parameter that we have also compared, changes on heart rate, respiration rate, blood pressure and mean arterial pressure were decrease significantly ($p < 0,05$) between before and after taking standard therapy medication.

Conclusion: Persistent or no change in cTnT levels between before and after taking standard therapy means there is no more damage or worsen in myocardial necrosis.

Keyword: Heart Failure, Standard Therapy, Cardiac Troponin T, Myocardial Necrosis.