

031. Urine Neutrophil Gelatinase-Associated Lipocalin (NGAL) Levels as a Predictor of Early Acute Kidney Injury in Post Coronary Artery Bypass Graft (CABG) Patients in H. Adam Malik Hospital Medan

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ABSTRACT

Background: One of the main complications after open heart surgery is acute kidney injury. Coronary Artery Bypass Graft surgery is one of the main factors in this complication. Currently, the use of serum creatinine as one of the diagnostic criteria for AKI is not sensitive for diagnosing AKI at an early stage. Elevated urine NGAL levels are more indicative of a renal damage process than an increase in circulation. An increase in NGAL levels in urine can occur 100 times faster than circulating NGAL. Thus our research aimed to view NGAL ability to predict AKI in CABG patient. **Methods:** This research is an observational study with cross-sectional data collection methods to find out whether NGAL can be a predictor of AKI in patients who have undergone CABG surgery. **Results:** The collection of research subjects was stopped when the number of samples had been reached so that this study was a cohort study with consecutive sampling techniques. In the results of this study, we obtained 31 research samples. In 31 research samples, it was found that the average age was 61.46 years with a standard deviation of 8.2 years. This study was dominated by male gender with a total of 20 people or 64% of the total sample. After CABG surgery, it was found that 4 patients had postoperative acute renal failure or 13.3% of the total sample. The sensitivity of the instrument is 100% with a specificity of 96%. The accuracy of the NGAL is 97.5%. **Conclusion:** NGAL is a useful parameter to predict AKI and would have significant advantage however further study with multi-center design would be necessary to validate these result.

Keywords: NGAL, AKI, CABG

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