Uji Diagnostik & Nilai Prognostik Presepsin sebagai Biomarker Sepsis pada Anak = Diagnostic & Prognostic Value of Presepsin as Sepsis Biomarker in Children

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Abstrak

Latar belakang: Sepsis sulit dibedakan dengan respon inflamasi non infeksi secara klinis dan kultur darah yang merupakan gold standar diagnosis sepsis memiliki banyak keterbatasan. Presepsin merupakan suatu biomarker baru namun belum banyak data tentang efektifitas penggunaanya pada anak.
Tujuan: Mengetahui nilai diagnostik dan prognostik presepsin dibandingkan dengan leukosit, PCT dan CRP pada pasien anak yang dicurigai sepsis
.....Method: The latitude cut study was conducted during March-December 2020 at RSCM Jakarta on 56 patients aged 2 months - 10 years with suspicion of sepsis Diagnosis of sepsis is established based on the criteria of sepsis-3 and blood culture. Biomarker examination and PELOD-2 score are performed at the beginning and after 72 hours, mortality assessment is conducted on day 7. Presepsin levels are checked using the PATHFAST® method.
Result: The median value of precessine levels in the proven sepsis group (1183 pg/ml was higher than that of the unproven group of sepsis (369 pg/ml, p=0.001). Precessine has a good diagnostic value (AUC of 0.862), with a cut of 711 pg/ml having a sensitivity of 75.8%, specificity of 82.6%, positive guess value of 86.2% and negative guess value of 70.4%, better than leukocytes, PCT, and CRP. Presepsin levels increased linearly with the severity of sepsis and were moderately correlated with PELOD-2 scores (r=0.548; p=0.001). Survival analysis showed precessine levels of 1,250 pg/ml were significantly associated with early mortality (HR 6.31; 95%CI; 1.67-23.83; p=0.007). Presepsin levels after 72 hours of antibiotic therapy decreased significantly in the improved sepsis group and increased in the worsening sepsis group.
Inference: Presepsin is a reliable biomarker and can be used to help diagnose sepsis, predict severity, death and evaluate therapies in tertiary hospital services.