

## Soluble cluster of differentiation 14 subtype (sCD14-ST) presepsin sebagai penanda pemantauan respons terapi dan prognosis pada sepsis neonatorum awitan lambat = Soluble cluster of differentiation 14 subtype (sCD14-ST) presepsin as therapeutic respons monitoring and prognostic marker in late onset neonatal sepsis

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### Abstrak

**ABSTRAK**  
Soluble CD14-ST presepsin merupakan penanda sepsis baru untuk diagnosis dan prognosis sepsis neonatorum. Kadar presepsin meningkat pada keadaan sepsis disebabkan oleh aktivitas protease di fagolisosom. Penelitian ini bertujuan untuk mengetahui manfaat pemeriksaan serial kadar presepsin sebagai penanda pemantauan respons terapi dan prognosis pada pasien SNAL secara bedside dengan menggunakan sampel darah kapiler. Desain penelitian kohort prospektif. Subjek penelitian terdiri dari 20 neonatus sehat dan 42 pasien SNAL. Pemeriksaan kadar presepsin dengan alat Pathfast pada hari ke-1, ke-3, dan ke-6 setelah diterapi. Kadar presepsin pada pasien SNAL 1104 pg/mL (608 ? 6225 pg/mL) lebih tinggi dibandingkan pada neonatus sehat 448 pg/mL (191 ? 513 pg/mL), nilai p 0,000. Pada pasien SNAL kelompok respons terapi kadar presepsin lebih rendah dibandingkan dengan kelompok non respons pada hari ke-3 dan ke-6 (p<0,05). Pada pasien SNAL kelompok non survivor kadar presepsin lebih tinggi dibandingkan dengan kelompok survivor hari ke-6 (p<0,05). Kadar presepsin berkorelasi positif dengan kadar CRP (r=0,488) dan jumlah leukosit (r=0,321). Nilai cut-off kadar presepsin hari ke-6 untuk penentuan prognosis 1365 pg/mL mempunyai AUC 0,789 (IK 95% 0,652 ? 0,926), sensitivitas 90,9%, dan spesifisitas 67,7%. Pemeriksaan presepsin hari ke-3 atau ke-6 secara bedside dengan darah kapiler bermanfaat untuk pemantauan terapi dan prognostik pasien SNAL.

**ABSTRACT**  
Soluble CD14-ST presepsin as a new septic marker for diagnostic and prognostic of neonatal sepsis. Concentration of presepsin significantly increases in bacterial sepsis induced by phagolysosome protease activity. The objective of this study is to investigate the prognostic and monitoring value of presepsin in late onset neonatal sepsis (LOS) with serial capillary whole blood assay. This was prospective cohort, from 20 healthy neonates and 42 LOS patient. The concentration of presepsin was analysed using Pathfast analyzer at 1st, 3rd & 6th day after therapy. Median of presepsin in LOS patient is 1104 pg/mL (608 ? 6225 pg/mL) significantly higher than healthy neonates 448 pg/mL (191 ? 513 pg/mL), p value 0.000. Median of presepsin at 3rd & 6th day after therapy in LOS with therapeutic respons is significantly lower than LOS with no respons (p<0.05). Median of presepsin at 6th day after therapy in nonsurvivor is significantly higher than in survivor (p<0.05). There are positive correlation between presepsin and CRP (r=0.488) or leucocyte count (r=0.321). Cut-off presepsin at 6th day after therapy 1365 pg/mL is found with AUC 0.789 (CI 95% 0.652 ? 0.926), sensitivity 90.9%, dan specificity 67.7%. Presepsin assay at 3rd or 6th day after therapy with capillary whole blood can be used to predict the prognostic and therapeutic respons in LOS patient.;Soluble CD14-ST presepsin as a new septic marker for diagnostic and prognostic of neonatal sepsis. Concentration of presepsin significantly increases in bacterial sepsis induced by phagolysosome protease activity. The objective of this study is to investigate the prognostic and monitoring value of presepsin in late onset neonatal sepsis (LOS) with serial capillary whole blood assay. This was prospective cohort, from 20 healthy neonates and 42 LOS patient. The

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