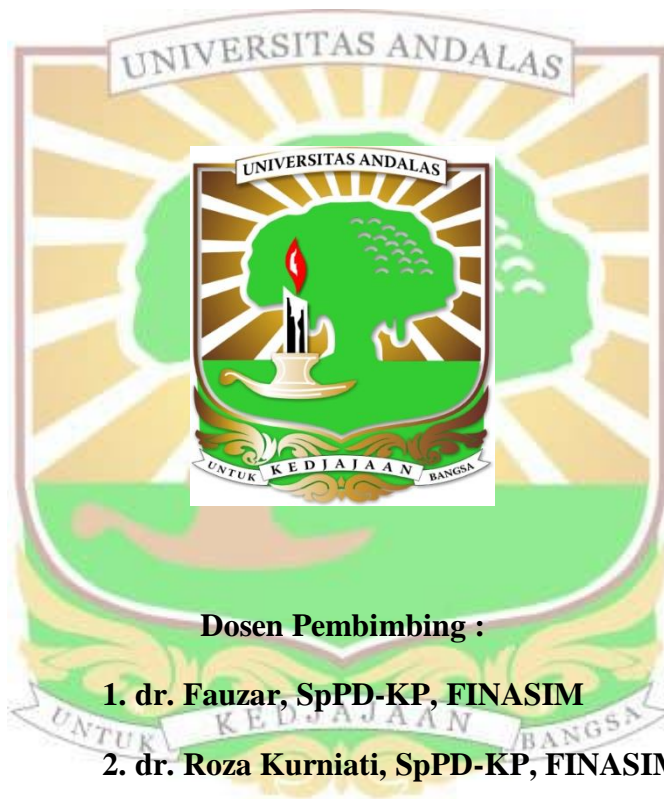


**KORELASI ANTARA KADAR *SOLUBLE TRIGGERING RECEPTOR
EXPRESSED ON MYELOID CELLS-1 (sTREM-1)* SPUTUM
DENGAN SKOR *EXPANDED CURB-65* PADA
PASIEN PNEUMONIA KOMUNITAS**

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ABSTRAK

KORELASI ANTARA KADAR SOLUBLE TRIGGERING RECEPTOR EXPRESSED ON MYELOID CELLS-1 (sTREM-1) SPUTUM DENGAN SKOR *EXPANDED* CURB-65 PADA PASIEN PNEUMONIA KOMUNITAS

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Pendahuluan : Pneumonia merupakan salah satu infeksi saluran pernapasan bawah dan merupakan penyakit infeksi utama penyebab kematian di seluruh dunia. Pneumonia komunitas merupakan pneumonia yang didapat di masyarakat. Penilaian derajat infeksi sejak awal diagnosis, dapat menurunkan risiko mortalitas pasien. Instrumen penilaian derajat pneumonia yang sering dipakai seperti biomarker dan skoring. *Triggering Receptor Expressed on Myeloid Cells-1* (TREM-1) merupakan protein transmembran yang termasuk dalam superfamili immunoglobulin secara selektif diekspresikan pada neutrofil darah, monosit, dan makrofag dan diregulasi oleh rangsangan bakteri, virus, dan jamur. *Soluble triggering receptor expressed on myeloid cell-1* (sTREM-1) adalah TREM-1 terlarut yang dapat diukur secara langsung dan diuji dalam cairan tubuh manusia, termasuk serum, efusi pleura, dahak, dan urin. Kadar sTREM-1 digunakan sebagai biomarker diagnosis, *follow up* terapi, dan prognosis penyakit infeksi. Skor *Expanded* CURB-65 merupakan suatu sistem skoring untuk menentukan derajat pneumonia komunitas. Skor ini merupakan pengembangan dari skor CURB-65 dengan penambahan tiga poin yaitu, kadar laktat dehidrogenase (LDH), trombositopenia dan hipoalbuminemia.

Metode : Penelitian ini adalah suatu penelitian observasional analitik dengan pendekatan *cross-sectional* yang dilaksanakan di Instalasi Rawat Inap Penyakit Dalam RSUP Dr. M. Djamil Padang selama 6 bulan. Sebanyak 38 sampel dipilih secara *consecutive sampling* yaitu pasien pneumonia komunitas yang memenuhi kriteria inklusi dan eksklusi.

Hasil : Pada penelitian ini didapatkan Rerata kadar sTREM-1 sputum pada pneumonia komunitas adalah 323,57 pg/ml (211,25) sementara rerata skor *Expanded* CURB-65 adalah 3,66 (1,59). Dari hasil uji statistik menggunakan uji Pearson didapatkan korelasi yang bermakna ($p < 0,05$) dengan arah korelasi positif dan kekuatan korelasi kuat ($r = 0,789$) antara kadar sTREM-1 sputum dengan skor *Expanded* CURB-65.

Kesimpulan : Terdapat korelasi positif yang bermakna dengan gradasi kuat antara kadar *soluble triggering receptor expressed on myeloid cells-1* (sTREM-1) sputum dan skor *Expanded* CURB-65 pada pasien pneumonia komunitas.

Kata kunci : Pneumonia komunitas, kadar *Soluble triggering receptor expressed on myeloid cell-1* (sTREM-1) sputum, skor *Expanded* CURB-65

ABSTRACT

CORELATION BETWEEN LEVELS OF SOLUBLE TRIGGERING RECEPTOR EXPRESSED ON MYELOID CELLS-1 (sTREM-1) SPUTUM WITH *EXPANDED* CURB-65 SCORE IN COMMUNITY ACQUIRED PNEUMONIA PATIENS

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Background : Pneumonia is a lower respiratory tract infection and is the leading infectious cause of death worldwide. Community acquired pneumonia is pneumonia that is acquired in the community. Assessing the severity of infection from the start of the diagnosis can reduce the risk of patient mortality. Frequently used assessment instruments for the severity of pneumonia include biomarkers and scoring. Triggering Receptor Expressed on Myeloid Cells-1 (TREM-1) is a transmembrane protein that belongs to the immunoglobulin superfamily which is selectively expressed on blood neutrophils, monocytes, and macrophages and is regulated by stimulation of bacteria, viruses, and fungi. Soluble triggering receptor expressed on myeloid cell-1 (sTREM-1) is a dissolved TREM-1 that can be directly measured and tested in human body fluids, including serum, pleural effusion, sputum, and urine. Levels of sTREM-1 are used as biomarkers of diagnosis, follow-up therapy, and prognosis of infectious diseases. The Expanded CURB-65 score is a scoring system to determine the severity of community acquired pneumonia. This score is an extension of the CURB-65 score with the addition of three points are, levels of lactate dehydrogenase (LDH), thrombocytopenia and hypoalbuminemia.

Objective : This study was an analytic observational study with a cross-sectional approach which was carried out in the Department of Internal Medicine Dr. M. Djamil Padang for 6 months. A total of 38 samples were selected by consecutive sampling, namely community acquired pneumonia patients who met the inclusion and exclusion criteria.

Result: In this study, the mean level of sTREM-1 sputum in community acquired pneumonia was 323.57 pg / ml (211.25) while the mean score of Expanded CURB-65 was 3.66 (1.59). From the results of statistical tests using the Pearson test, there was a significant correlation ($p < 0.05$) with a positive correlation direction and a strong correlation strength ($r = 0.789$) between the sTREM-1 sputum level and the Expanded CURB-65 score.

Conclusion: There is a significant positive correlation with strong gradations between the levels of soluble triggering receptor expressed on myeloid cells-1 (sTREM-1) sputum and the Expanded CURB-65 score in community acquired pneumonia patients.

Keywords: Community acquired pneumonia, Soluble triggering receptor expressed on myeloid cells-1 (sTREM-1) sputum, Expanded CURB-65 score