

TESIS

**PERBEDAAN KADAR *MID-REGIONAL PRO-ADRENOMEDULLIN*
SERUM ANTARA KELOMPOK RISIKO *SEVERE* DENGAN
NON-SEVERE SKOR *EXPANDED CURB-65*
PASIEN PNEUMONIA KOMUNITAS**



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ABSTRAK
PERBEDAAN KADAR MID-REGIONAL PRO-ADRENOMEDULLIN SERUM
ANTARA KELOMPOK RISIKO SEVERE DENGAN NON-SEVERE SKOR
EXPANDED CURB-65 PASIEN PNEUMONIA KOMUNITAS

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Pendahuluan : Pneumonia komunitas masih menjadi masalah global dengan prevalensi dan angka mortalitas yang tinggi. Pneumonia menduduki peringkat pertama penyebab kematian akibat penyakit menular di seluruh dunia. Manifestasi klinis pneumonia komunitas dapat ringan dan *self-limiting* sampai fatal dan mengancam nyawa. Penatalaksanaan pneumonia komunitas dapat ditentukan berdasar tingkat keparahan dan prognosis. Instrumen penilaian penyakit seperti sistem skoring dan biomarker dapat menentukan tingkat keparahan dan prognosis pneumonia komunitas. Skor *Expanded CURB-65* setelah divalidasi lebih baik dibanding PSI maupun skor *CURB-65*. Pemeriksaan biomarker baru terus dikembangkan untuk menilai tingkat keparahan, membantu pengambilan keputusan terapi dan menentukan prognosis pasien pneumonia komunitas. *Mid-Regional pro-Adrenomedulin* (MR-proADM) diteliti secara luas sebagai marker prognosis pneumonia komunitas karena kadarnya dapat menjadi indikasi infeksi berat. *Mid-Regional pro-Adrenomedulin* merupakan biomarker yang valid dalam menilai tingkat keparahan dan lebih superior dibanding biomarker lain untuk menentukan prognosis pasien pneumonia komunitas. Penelitian ini menilai perbedaan kadar Mr-proADM serum antara kelompok risiko *severe* dengan *non-severe* skor *Expanded CURB-65* pasien pneumonia komunitas.

Metode : Penelitian ini merupakan penelitian observasional analitik dengan desain *cross sectional* yang dilaksanakan di Instalasi Rawat Inap Departemen Ilmu Penyakit Dalam RSUP Dr. M. Djamil Padang selama 6 bulan. Sampel dipilih secara *consecutive sampling* sebanyak 20 pasien pneumonia komunitas kelompok risiko *severe* dan 20 pasien kelompok risiko *non-severe* skor *Expanded CURB-65*. Pada sampel dilakukan pemeriksaan kadar MR-proADM serum dengan teknik *enzyme linked immunosorbent assay* (ELISA), kemudian dianalisis perbedaannya menggunakan SPSS 26.0.

Hasil : Pada penelitian ini didapatkan rerata kadar MR-proADM serum pasien kelompok risiko *severe* skor *Expanded CURB-65* yaitu 0,589 (0,092) nmol/L dan pada kelompok risiko *non-severe* yaitu 0,229 (0,088) nmol/L. Kadar MR-proADM serum pada kelompok risiko *severe* skor *Expanded CURB-65* pasien pneumonia komunitas lebih tinggi dan bermakna secara statistik dibandingkan kelompok risiko *non-severe* ($p < 0,001$).

Kesimpulan : Terdapat perbedaan yang bermakna secara statistik kadar MR-proADM serum pasien pneumonia komunitas antara kelompok risiko *severe* dengan kelompok risiko *non-severe* skor *Expanded CURB-65*.

Kata kunci : Pneumonia komunitas, *Expanded CURB-65*, MR-proADM serum.

ABSTRACT
**DIFFERENCES MID-REGIONAL PRO-ADRENOMEDULLIN SERUM LEVELS
BETWEEN SEVERE AND NON-SEVERE EXPANDED CURB-65 SCORE IN
PATIENTS WITH COMMUNITY-ACQUIRED PNEUMONIA**

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Background : Community-acquired pneumonia is still a global problem with a high prevalence and mortality rate. Pneumonia ranks first as the cause of death from infectious diseases worldwide. The clinical manifestations of community-acquired pneumonia varies, ranging from mild and self-limiting to fatal and life-threatening. The management of community-acquired pneumonia can be determined based on the severity and prognosis. Disease assessment instruments such as scoring systems and biomarkers can determine the severity and prognosis of community-acquired pneumonia. The Expanded CURB-65 score after being validated is better than the PSI and CURB-65 scores. New biomarker tests are continuously being developed to assess severity, assist in making therapeutic decisions and determine the prognosis of community-acquired pneumonia patients. Mid-Regional pro-Adrenomedullin (MR-proADM) is widely studied as a prognostic marker for community-acquired pneumonia because its levels can be indicative of severe infection. Mid-Regional pro-Adrenomedullin is a valid biomarker in assessing severity and is superior to other biomarkers for determining the prognosis of community-acquired pneumonia patients. This study assessed the difference in MR-proADM serum levels between the severe risk group and the non-severe Expanded CURB-65 score in community-acquired pneumonia patients.

Method : This study was an analytic observational study with a cross-sectional design that was carried out at the Inpatient Installation of the Department of Internal Medicine, Dr. M. Djamil General Hospital Padang, for 6 months. Samples were selected by consecutive sampling of 20 community-acquired pneumonia patients in the severe risk group and 20 patients in the non-severe risk group with Expanded CURB-65 scores. The samples were examined for MR-proADM serum levels using the enzyme-linked immunosorbent assay (ELISA) technique, and then the differences were analyzed using SPSS 26.0.

Results: In this study, the mean MR-proADM serum level of patients in the severe risk group with Expanded CURB-65 scores was 0.589 (0.092) nmol/L and in the non-severe risk group it was 0.229 (0.088) nmol/L. MR-proADM serum levels in the severe risk group with Expanded CURB-65 scores in community-acquired pneumonia patients were higher and statistically significant than the non-severe risk group ($p < 0.001$).

Conclusion: There is a statistically significant difference in MR-proADM serum levels in patients with community-acquired pneumonia between the severe risk group and the non-severe risk group with Expanded CURB-65 scores.

Keywords: Community-acquired pneumonia, Expanded CURB-65, MR-proADM serum.