INTISARI

Latar Belakang: *Community-acquired Pneumonia* (CAP) merupakan salah satu penyakit menular paling umum dan penyebab penting morbiditas dan mortalitas di seluruh dunia. Peningkatan nilai *red cell distribution width* (RDW) belakangan ini diketahui berkaitan dengan morbiditas baik pada populasi umum maupun pasien dengan penyakit tertentu seperti penyakit kardiovaskular, stroke dan CAP. Namun, penelitian mengenai hubungan antara peningkatan nilai RDW dengan CAP masih terbatas jumlahnya.

Tujuan Penlitian: Untuk mengetahui perbedaan proporsi pasien CAP dengan peningkatan nilai RDW dibanding populasi sehat dengan peningkatan nilai RDW.

Metode Penelitian: studi *cross-sectional* dari data rekam medis pasien rawat inap yang terdiagnosis CAP di RSUP Dr. Sardjito dalam periode Maret 2014 hingga Maret 2015 dan data *general check-up* pegawai RSUP Dr. Sardjito dengan hasil normal yang memenuhi kriteria inklusi. Uji analisis statistik digunakan untuk mengetahui kebermaknaan perbedaan proporsi kedua populasi terhadap peningkatan nilai RDW serta kebermaknaan faktor-faktor perancu yang dikategorikan menjadi jenis kelamin, kelompok usia, data laboratorium, dan komorbiditas.

Hasil Penelitian: Jumlah total subjek adalah 248. Hasil analisis bivariat menunjukkan perbedaan yang bermakna pada proporsi pasien CAP (n=116) dan populasi sehat (n=142) terhadap peningkatan nilai RDW ($p<0,01$). Pada analisis regresi multivariat, faktor yang mempengaruhi peningkatan nilai RDW diantaranya penurunan nilai hemoglobin (<12,66 g/dL), peningkatan nilai leukosit (>9,70x10^9/L), komorbiditas sepsis, penyakit kardiovaskular, anemia, penyakit ginjal dan saluran kemih, serta penyakit hepar.

Kesimpulan: Pasien CAP dengan peningkatan nilai RDW (>14,5%) setidaknya 20% lebih banyak dibanding populasi sehat dengan peningkatan nilai RDW (>14,5%).

Kata kunci: *community-acquired pneumonia, red cell distribution width,* populasi sehat.

ABSTRACT

Backround: Community-acquired pneumonia (CAP) is one of the most common infectious diseases and a major cause of morbidity and mortality worldwide. Recently, elevated red cell distribution width (RDW) is known to be associated with morbidity both in the general population and patients with certain diseases, such as cardiovascular diseases, stroke, and CAP. However, little is known about correlation between elevated RDW with CAP.

Objective: To determine difference in proportions between CAP patients with elevated RDW and healthy population with elevated RDW.

Methods: Cross-sectional study was conducted from the medical records of hospitalized patients diagnosed with CAP in RSUP Dr. Sardjito between March 2014 to March 2015 and healthy RSUP Dr. Sardjito employees' general check-up data that met inclusion criteria. Results were analyzed by statistical tests to determine the significance of difference between two population proportions and the significance of confounding factors that were categorized based on gender, age groups, laboratory data, and comorbidities.

Results: A total of 248 subjects were included. Bivariate analysis result showed significant difference in proportions ($p<0,01$) between CAP patients with elevated RDW (n=116) and healthy population with elevated RDW (n=132). In multivariate regression analysis, factors associated with elevated RDW included low hemoglobin levels (<12.66 g/dL), elevated leucocyte counts (> 9,70x109 / L), comorbidities (sepsis, cardiovascular diseases, anemia, kidney and urinary tract diseases, and liver diseases).

Conclusion: CAP patients with elevated RDW (>14,5%) are at least 20% more than than healthy population with elevated RDW (14,5%).

Keywords: community-acquired pneumonia, red cell distribution width, healthy population.