ABSTRAK

Latar Belakang : Sepsis akibat *Multi Drug Resistant Organism* (MDRO) menjadi tantangan besar dalam dunia medis karena tingginya prevalensi, keterbatasan terapi, serta tingginya angka mortalitas. Deteksi dini risiko kematian perlu dilakukan menggunakan alat sederhana seperti *quick Sequential Organ Failure Assessment* (qSOFA) atau *National Early Warning Score* (NEWS). Namun, belum ada penelitian yang secara khusus membandingkan akurasinya pada sepsis akibat MDRO.

Tujuan : Membandingkan akurasi prognostik qSOFA dan NEWS serta mengidentifikasi faktor risiko klinis dan laboratoris terhadap kematian pasien sepsis akibat MDRO.

Metode : Sebuah studi kohort retrospektif pada pasien sepsis akibat MDRO pada periode 1-30 September 2024. Data sekunder berupa karakteristik klinis dan laboratoris diperoleh dari rekam medik pasien. Analisis data menggunakan tabel 2x2, kurva ROC, uji bivariat (*chi-square* atau *Fisher's Exact*), serta uji multivariat dengan regresi logistik biner metode *Backward LR*.

Hasil : Sejumlah 76 pasien dengan sepsis akibat MDRO diikutsertakan dalam penelitian ini dengan angka mortalitas sebesar 47,37%. Skor NEWS $\geq$ 5 dibandingkan dengan qSOFA $\geq$ 2 menunjukkan sensitivitas yang lebih tinggi (80,55% vs 47,22%), spesifisitas lebih rendah (80,00% vs 97,50%), akurasi lebih baik (80,26% vs 73,68%), serta AUC yang lebih baik (0,743; *p=0,014 vs* 0,737;

p=0,017). Model multivariat menemukan bahwa qSOFA ≥ 2 (aOR: 21,793; 95% CI: 1,780-266,879; *p = 0,016*), ketidaksesuaian antibiotik (aOR: 7,621; 95% CI: 1,300-44,661; p=0,024), dan NEWS ≥ 5 (aOR: 4,976; 95% CI: 1,206-20,535; *p = 0,027*) merupakan faktor risiko independen terhadap kejadian kematian.

Kesimpulan : Dalam penelitian ini, skor NEWS memiliki performa lebih superior dibandingkan qSOFA dalam memprediksi kejadian kematian pasien sepsis akibat MDRO. Faktor risiko independen yang berhubungan dengan kejadian kematian adalah qSOFA ≥ 2, ketidaksesuaian antibiotik, dan NEWS ≥ 5.

Kata Kunci : *qSOFA, NEWS, Sepsis, Faktor Risiko, Kematian , MDRO*

ABSTRACT

Background : Sepsis caused by Multi-Drug Resistant Organisms poses significant challenges in modern medicine due to its increasing prevalence, limited therapeutic options, and high mortality rates. Early detection of mortality risk is essential and can be performed using simple tools such as the quick Sequential Organ Failure Assessment (qSOFA) or the National Early Warning Score (NEWS). However, no study has specifically compared the prognostic accuracy in MDRO related sepsis.

Aim : To compare the prognostic performance of qSOFA and NEWS in predicting mortality among MDRO related sepsis patients and to identify clinical and laboratory risk factors associated with mortality.

Methods : A retrospective cohort study was conducted on MDRO related sepsis patients from 1-30 September 2024. Clinical and laboratory characteristic data were obtained secondarily using medical record. Data were analyzed using 2x2 tables, ROC curves, bivariate analysis with chi-square or Fisher's Exact, and multivariate analysis with binary logistic regression using the Backward LR method.

Results : A total of 76 MDRO related sepsis patients were included in this study, with a mortality rate of 47.37%. Compared to qSOFA $\geq$ 2, NEWS $\geq$ 5 showed higher sensitivity (80.55% vs 47.22%), lower specificity (80.00% vs 97.50%), better accuracy (80.26% vs 73.68%), and higher AUC (0.743; *p=0.014 vs* 0.737; *p=0.017*). Multivariate analysis identified qSOFA $\geq$ 2 (aOR: 21.793; 95% CI: 1.780-266.879; *p = 0.016*), inppropriate antibiotic (aOR: 7.621; 95% CI: 1.300-

44.661; p=0.024), and NEWS $\geq$ 5 (aOR: 4.976; 95% CI: 1.206-20.535; *p = 0.027*) as the independent risk factors for mortality.

Conclusion : In this study**,** NEWS demonstrated superior performance compared to qSOFA in predicting mortality risk in patients with MDRO related sepsis. Independent risk factors associated with mortality were qSOFA $\geq$ 2, inappropriate antibiotic, and NEWS $\geq$ 5.

Keywords : *qSOFA , NEWS, Sepsis, Risk Factor, Mortality, MDRO*