INTISARI

Latar belakang: Sepsis masih merupakan salah satu penyebab utama kesakitan dan kematian pada anak di seluruh belahan dunia. Diagnosis pasti sepsis adalah dengan kultur darah, namun *false negative* kultur darah relatif tinggi dan membutuhkan waktu lima sampai dengan tujuh hari untuk menunggu biakan mikroorganisme pada kultur. Sehingga dibutuhkan *triage tool* tervalidasi untuk diagnosis cepat dan terapi segera pada sepsis, yang mampu menurunkan mortalitas sepsis. Di Indonesia pedoman diagnosis dan tata laksana sepsis anak berdasarkan PNPK sepsis 2021.

Tujuan: Mengevaluasi performa PNPK sepsis 2021 dalam mendiagnosis sepsis bakterial pada anak.

Metode: Penelitian *cross-sectional* dengan menggunakan data sekunder dari rekam medis pasien anak yang dirawat di PICU RSUP Dr. Sardjito periode Oktober 2019-Oktober 2021 dengan dugaan infeksi bakterial yang memenuhi kriteria inklusi dan ekslusi. Sebanyak 200 subjek dimasukkan dalam penelitian secara *consecutive sampling*. Selanjutnya dilakukan penilaian sepsis dengan PNPK sepsis 2021, dan dilakukan analisis performa PNPK sepsis 2021 dengan SPSS versi 25, dengan menilai sensitivitas, spesitifitas, akurasi, Nilai Prediktif Positif, Nilai Prediktif Negatif, dan *Likelihood ratio*.

Hasil: Dari penelitian ini didapatkan sebagian besar subjek adalah laki-laki (52,5%) dengan distribusi usia terbanyak <1 tahun (40,5%), fokus infeksi terbanyak sistem respirasi (49%), 63,5% merupakan kasus rujukan, dengan lama perawatan >48 jam (69,7%). Sebanyak 77% subjek sudah mendapatkan antibiotik pada perawatan di rumah sakit sebelumnya. Untuk luaran, 63,5% subjek hidup dan 36,5% meninggal. Lama perawatan subjek di PICU 9,5 ± 9,4 hari. Sebanyak 31/200 (15,5%) subjek didiagnosis sepsis berdasarkan PNPK sepsis 2021. *Positivity rate* kultur darah dari penelitian ini sebesar 19%. Evaluasi performa PNPK sepsis 2021 terhadap referensi standar kultur darah didapatkan sensitivitas 28,95%, spesifisitas 87,65%, akurasi 76,5%, Nilai Prediksi Positif (PPV) 35,48%, Nilai Prediksi Negatif (NPV) 84,02%, *Positive Likehood Ratio* (LR +) 2.34 (95% IK, 56%-81%), dan *Negative Likehood Ratio* (LR -) 0.81 (95% IK, 41%-49%).

Kesimpulan: PNPK sepsis 2021 mempunyai sensitivitas 28,95% dan spesifisitas 87,65% dalam mendiagnosis sepsis bakterial.

Kata kunci: sepsis, PNPK sepsis 2021, kultur darah, PELOD-2

ABSTRACT

Background: Sepsis still one of the main causes of child morbidity and mortality in worldwide. The definitive diagnosis of sepsis is blood culture, but it's false negative is relatively high and it takes five to seven days to microorganism growth in blood culture. Therefore, a validated triage tool is needed for rapid diagnosis and prompt treatment of sepsis, which can reduce the mortality risk. In Indonesia, guidelines for diagnosis and management of pediatric sepsis are based on PNPK sepsis 2021.

Objective: To evaluate the performance of PNPK sepsis 2021 in diagnosis of bacterial sepsis in children.

Methods: This is a cross-sectional study using secondary data from medical records of pediatric patients treated in PICU of Dr. Sardjito hospital for periode October 2019-October 2021 which suspected bacterial infection that meet the inclusion and exclusion criteria. Total 200 subjects were included in this study by consecutive sampling. Then the sepsis assessment was carried out with PNPK sepsis 2021. Performance analysis of PNPK sepsis 2021 was conducted with SPSS version 25, by assessing sensitivity, specificity, accuracy, Positive Predictive Value, Negative Predictive Value, and Likelihood ratio.

Results: This study found that the most of the subjects were male (52.5%), with the most age distribution <1 year old (40.5%), the most focus infection is the respiratory system (49%), 63.5% were referral cases, with length of stay in previous hospital >48 hours (69.7%). There are 77% of subjects had administrated antibiotics at the previous hospital. For the subject outcome, 63.5% were survive and 36.5% were died. The length of stay (LOS) in PICU was 9.5 ± 9.4 days. In sepsis assessment based on PNPK sepsis 2021, found 31/200 (15.5%) subjects were diagnosed sepsis. The positivity rate of blood culture in this study was 19%. Performance evaluation of PNPK sepsis 2021 revealed sensitivity 28.95%, specificity 87.65%, accuracy 76.5%, Positive Predictive Value (PPV) 35.48%, Negative Predictive Value (NPV) 84.02% , Positive Likehood Ratio (LR +) 2.34 (95% CI, 56%-81%), and Negative Likehood Ratio (LR -) 0.81 (95% CI, 41%-49%).

Conclusion: PNPK sepsis 2021 has sensitivity 28.95% and specificity 87.65% in diagnose bacterial sepsis.

Keywords: sepsis, PNPK sepsis 2021, blood culture, PELOD-2