

INTISARI

Latar Belakang:

Lama rawat inap (length of stay/LOS) merupakan indikator penting dalam menilai keparahan penyakit dan efisiensi pelayanan kesehatan pada anak dengan infeksi dengue. Prediksi LOS sejak awal perawatan dapat membantu pengambilan keputusan klinis dan manajemen sumber daya rumah sakit.

Tujuan:

Menilai kemampuan status gizi, jumlah trombosit, indeks trombosit, dan warning signs sebagai prediktor lama rawat inap pada anak dengan infeksi dengue.

Metode:

Penelitian observasional analitik dengan desain kohort retrospektif dilakukan pada pasien anak dengan infeksi dengue yang dirawat di RSUP Dr. Sardjito Yogyakarta periode 2019–2024. Outcome penelitian adalah LOS >4 hari. Analisis dilakukan menggunakan uji bivariat, regresi logistik multivariat, serta evaluasi performa model menggunakan kurva receiver operating characteristic (ROC).

Hasil:

Sebanyak 104 pasien memenuhi kriteria penelitian. Lama rawat inap >4 hari ditemukan pada 30,8% pasien. Analisis bivariat menunjukkan status gizi berhubungan signifikan dengan LOS ($p < 0,001$), sedangkan jumlah trombosit, indeks trombosit, dan warning signs tidak bermakna. Pada analisis multivariat, status gizi tetap menjadi prediktor independen LOS >4 hari (aOR 4,76; IK95% 2,15–10,53; $p < 0,001$). Model dasar yang hanya menggunakan trombosit memiliki AUC 0,502, sedangkan model gabungan memiliki AUC 0,778 dengan sensitivitas 83,3% dan spesifisitas 50,0%.

Kesimpulan:

Model gabungan memiliki kemampuan prediksi yang lebih baik dibandingkan trombosit saja dalam memprediksi LOS pada anak dengan infeksi dengue. Status gizi merupakan prediktor independen yang paling berpengaruh terhadap lama rawat inap.

Kata kunci: dengue, anak, status gizi, trombosit, lama rawat inap, prediksi.

ABSTRACT

Background:

Length of stay (LOS) is an important indicator of disease severity and healthcare efficiency in pediatric dengue infection. Early prediction of LOS may facilitate clinical decision-making and hospital resource allocation.

Objective:

To evaluate the predictive value of nutritional status, platelet count, platelet indices, and warning signs for prolonged hospitalization in children with dengue infection.

Methods:

A retrospective cohort study was conducted among pediatric dengue patients admitted to Dr. Sardjito General Hospital, Yogyakarta, Indonesia, between 2019 and 2024. The primary outcome was LOS >4 days. Bivariate analysis, multivariable logistic regression, and receiver operating characteristic (ROC) curve analysis were performed to assess predictor performance.

Results:

A total of 104 children were included. Prolonged hospitalization (>4 days) occurred in 30.8% of patients. Bivariate analysis demonstrated a significant association between nutritional status and LOS ($p < 0.001$), whereas platelet count, platelet indices, and warning signs were not significantly associated with LOS. In multivariable analysis, nutritional status remained an independent predictor of prolonged hospitalization (adjusted OR 4.76; 95% CI 2.15–10.53; $p < 0.001$). The platelet-only model showed poor discrimination (AUC=0.502), while the combined model incorporating nutritional status, platelet parameters, and warning signs demonstrated improved predictive performance (AUC=0.778), with a sensitivity of 83.3% and specificity of 50.0%.

Conclusion:

The combined model outperformed platelet count alone in predicting prolonged hospitalization among children with dengue infection. Nutritional status was the strongest independent predictor of LOS and may serve as an important component of early risk stratification.

Keywords: dengue infection, children, nutritional status, platelet indices, length of stay, prediction model.