

INTISARI

Latar belakang: Leukemia limfoblastik akut (LLA) merupakan penyakit keganasan pada anak yang paling sering dijumpai. Identifikasi prediktor kematian pada anak dengan LLA yang mengalami demam neutropenia perlu dilakukan agar dapat meningkatkan kewaspadaan. Demam neutropenia merupakan kegawatan di bidang onkologi. Penurunan neutrofil sebagai pertahanan tubuh menjadikan pasien rentan terhadap infeksi dan meningkatkan risiko kematian.

Tujuan: Mengetahui prediktor kematian pada anak dengan leukemia limfoblastik akut yang mengalami demam neutropenia.

Metode: Penelitian observasional analitik dengan desain kohort retrospektif. Dilakukan analisis bivariat dengan metode *chi square* untuk menilai *relative risk* (RR). Hasil yang signifikan dianalisis kembali menggunakan analisis multivariat metode regresi logistik.

Hasil penelitian: Sebanyak 154 pasien diikutsertakan dalam analisis dengan 47 (30,5%) subjek mengalami kematian dan 107 subjek tetap hidup setelah mengalami demam neutropenia. Trombositopenia berat OR 4.94 (IK95%; 1.66-14.73), LLA *high risk* (IK95%; 3.47-113.47), pneumonia OR 5.29 (IK95%; 1.87-14.98), dan sepsis OR 64.95 (IK95%; 12.13-347.87) merupakan faktor prediktor kematian anak dengan LLA yang mengalami demam neutropenia. Sedangkan anemia RR 1.057 (IK95%; 0.65-1.73), peningkatan kadar prokalsitonin >0,5ng/mL RR 1.89 (IK95%; 1.01-3.71), bakteremia RR 2.32 (IK95%; 1.49-3.62), fase kemoterapi induksi RR 2.27 (IK95%; 1.17-4.43) bukan merupakan faktor prediktor kematian.

Kesimpulan: faktor prediktor kematian pasien LLA yang mengalami demam neutropenia adalah trombositopenia berat, kelompok *high risk*, pneumonia, dan sepsis.

Kata kunci: *demam neutropenia, leukemia limfoblastik akut, anak, prediktor kematian*

ABSTRACT

Background: Acute lymphoblastic leukemia (ALL) is the most common malignancy in children. Identification of mortality predictors in children with ALL who have febrile neutropenia can increase alertness. Febrile neutropenia is an emergency in oncology. Decrease in neutrophil counts which acts as the defense system make patients more vulnerable to infection and increase the risk of death.

Objective: To determine the predictors of mortality in children with ALL who have febrile neutropenia.

Methods: An observational analytic study with a retrospective cohort design. Bivariate analysis using chi square to assessing relative risk (RR). Significant results we analyzed using multivariate analysis with logistic regression methods.

Results: A total of 154 patients were included in the analysis with 47 (30.5%) subjects died and 107 subjects survive after experiencing febrile neutropenia. Severe thrombocytopenia OR 4.94 (CI 95%; 1.66-14.73), high risk chemotherapy protocol (CI 95%; 3.47-113.47), pneumonia OR 5.29 (CI 95%; 1.87-14.98), and sepsis OR 64.95 (CI 95%; 12.13-347.87) were predictor factors for mortality in children with ALL who have febrile neutropenia. Meanwhile anemia RR 1,057 (CI 95%; 0.65-1.73), increased levels of procalcitonin > 0.5ng / mL RR 1.89 (CI 95%; 1.01-3.71), bacteremia RR 2.32 (CI 95%; 1.49-3.62) and induction phase of chemotherapy RR 2.27 (CI 95%; 1.17-4.43) were not predictor of mortality.

Conclusion: Predictors of mortality in ALL patients who have febrile neutropenia are severe thrombocytopenia, high risk group, pneumonia, and sepsis.

Keywords: *febrile neutropenia, acute lymphoblastic leukemia, children, predictors of mortality*