

Faktor-faktor yang berhubungan dengan tingkat keparahan pneumonia pada anak dengan Acute Lymphoblastic Leukemia = Factors associated with the severity of pneumonia in children with Acute Lymphoblastic Leukemia

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Abstrak

Latar Belakang: Acute lymphoblastic leukemia (ALL) adalah jenis kanker yang paling umum pada anak-anak dan sering menjadi penyebab kematian. Pneumonia adalah salah satu infeksi serius yang mempengaruhi prognosis dan kelangsungan hidup anak dengan ALL. Penelitian ini bertujuan untuk menganalisis faktor-faktor yang berhubungan dengan tingkat keparahan pneumonia pada anak dengan ALL. Metode: Penelitian ini menggunakan desain cross-sectional dengan consecutive sampling pada 103 responden. Data retrospektif diambil dari rekam medis anak dengan ALL yang terdiagnosis pneumonia di RSAB Harapan Kita dari tahun 2018 hingga 2023. Analisis statistik menggunakan uji Chi-square dan regresi logistik ganda.

Hasil: Dari 103 anak dengan ALL, 61,2% mengalami pneumonia berat. Mayoritas responden adalah bayi dan balita (53,4%), 56,3% berjenis kelamin laki-laki, 55,7% memiliki status gizi tidak normal, 53,4% berada pada fase pengobatan induksi, 61,2% menggunakan terapi kortikosteroid 3-5 hari sebelum dan saat terdiagnosis, 58,3% pernah menerima transfusi darah, 90,3% tipe ALL B, 57,3% mengalami neutropenia, 80,6% anemia dan 83,5% memiliki kadar CRP tidak normal. Analisis bivariat menunjukkan status gizi, fase pengobatan, terapi kortikosteroid dan kadar CRP berhubungan dengan tingkat keparahan pneumonia pada anak-anak dengan ALL. Analisis multivariat menunjukkan variabel status gizi (OR 3.024, 95% CI: 1.216-7.522) dan kadar CRP (OR 8.337, 95% CI: 2.29-30.348) berhubungan dengan tingkat keparahan pneumonia setelah dikontrol oleh variabel fase pengobatan (OR 1.588, 95% CI: 0.433-5.826) dan terapi kortikosteroid (OR 1.855, 95% CI: 0.493-6.978).

Kesimpulan: Anak dengan ALL yang menjalani kemoterapi berisiko tinggi mengalami pneumonia berat. Sangat penting untuk meningkatkan kewaspadaan terhadap infeksi ketika anak dengan ALL berada dalam fase induksi, terutama jika mereka telah menggunakan terapi kortikosteroid selama 3-5 hari sebelumnya dan memiliki status gizi yang tidak normal (gizi kurang atau gizi lebih).

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Background: Acute lymphoblastic leukemia (ALL) is the most common type of cancer in children and a leading cause of mortality. Pneumonia is one of infection that significantly affects the prognosis and survival of children with ALL. This study aims to analyze the factors associated with the severity of pneumonia in children with ALL.

Methods: This cross-sectional study used consecutive sampling of 103 respondents. Retrospective data were collected from the medical records of children with ALL diagnosed with pneumonia at RSAB Harapan Kita from 2018 to 2023, using the SMART System. Statistical analysis was performed using the Chi-square test and multiple logistic regression.

Results: Among 103 children with ALL, 61.2% experienced severe pneumonia. The majority of respondents were infants and toddlers (53.4%), 56.3% were male, and 55.7% had abnormal nutritional status.

Additionally, 53.4% were in the induction treatment phase, and 61.2% had received corticosteroid therapy 3-5 days before and at the time of diagnosis. Furthermore, 58.3% had received blood transfusions, 90.3% had ALL type B, 57.3% experienced neutropenia, 80.6% had anemia, and 83.5% had abnormal CRP levels. Bivariate analysis indicated that nutritional status, treatment phase, corticosteroid therapy, and CRP levels were associated with the severity of pneumonia in children with ALL. Multivariate analysis showed that nutritional status (OR 3.024, 95% CI: 1.216- 7.522) and CRP levels (OR 8.337, 95% CI: 2.29-30.348) were associated with pneumonia severity after controlling for treatment phase (OR 1.588, 95% CI: 0.433-5.826) and corticosteroid therapy (OR 1.855, 95% CI: 0.493-6.978).

Conclusion: Children with ALL undergoing chemotherapy are at high risk of severe pneumonia. It is crucial to increase vigilance against infections when children with ALL are in the induction phase, especially if they have received corticosteroid therapy in the preceding 3-5 days and have abnormal nutritional status (undernutrition or overnutrition).