

ABSTRACT

**DRUG UTILIZATION STUDY IN PEDIATRIC PNEUMONIA
PATIENT WITH ACUTE LYMPHOBLASTIC LEUKEMIA
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Background Acute Lymphoblastic Leukemia's (ALL) pediatric patients have a high risk of pneumonia infection. Pediatric pneumonia patients with leukemia require a complex therapy consisting of antibiotic, chemotherapy and other supportive medicines. This may increase the risk of drug related problems.

Objective The aims of this study were to analyze the profile of drugs used in the therapy of pediatric pneumonia with ALL based on type, dose, route of administration, and frequency of drug use, as well as DRPs including potential interaction and adverse effects.

Methods A retrospective observational study was conducted in pediatric pneumonia patients with ALL, which were hospitalized in inpatient care unit of pediatric department Dr. Soetomo Hospital in the period of January 1st 2015 to December 31st 2017 meeting the inclusion criteria.

Results Thirty three pediatric pneumonia patients with ALL were included in this study. Antibiotic used as primary therapy of pneumonia. The distribution of antibiotic agent used in pediatric patient were ampicillin IV 25-50 mg/kg taken 4 times per day (67%); gentamicin IV 5-8 mg/kg/day in combination (61%); ceftriaxone IV 40-50 mg/kg taken twice a day (48%). Other antibiotics included ampicillin sulbactam, cefotaxime, amikacin, and meropenem. The supportive therapies of pneumonia given to the patient were oxygen (61%), Infusion (88%), paracetamol (70%), salbutamol (18%) and ambroxol (18%). Mayor potential interaction was found in 36% of all patients and actual side effect in 3% of all patients.

Conclusion Profile of therapy pneumonia in pediatric pneumonia patients with ALL in Dr. Soetomo Hospital was in accordance with the literature and clinical practice guidelines of Dr. Soetomo Hospital.

Keyword : *Pediatric pneumonia with ALL, Drug Utilization Study (DUS), antibiotics, supportive drugs, Drugs Related Problems*