

**ABSTRACT****DRUG UTILIZATION STUDY OF ANTIBIOTICS  
THERAPY IN PEDIATRICS HOSPITALISED  
WITH PNEUMONIA (Study at Airlangga  
University Hospital Surabaya)**

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Pneumonia is an acute infection of lung tissue caused by inflammation of the lung parenchyma and compaction exudates in the lung tissue caused by *Streptococcus pneumoniae*. Based on the clinical and epidemiological data, pneumonia can be divided into community-acquired pneumoniae (CAP) and hospital acquired pneumoniae (HAP). In Indonesia, Riskesdas reported that the incidence of pneumonia increased from 2.1% in 2007 to 2.7% in 2013. Increased use of antibiotics was associated with increased risk of microbial resistance.

This study aimed to review the antibiotics usage in pediatric patients diagnosed with pneumonia and to identify the drug-related problems that might occur. A retrospective study was conducted to collect data from January 1<sup>st</sup> to Desember 31<sup>st</sup>, 2016. Inclusion criteria included pediatric patients aged 0-14 years admitted to the hospital with either CAP or HAP with or without other comorbidities and received antibiotics. Research protocol was ethically approved by the Hospital Ethics Committee.

There were 28 patients included in the study with females (61%) more than males (39%), aged 1 month to 2 years. Most of patients got duration of treatment less than 7 days (71%), while others were 7-14 days (24%). No microbiological cultures were obtained from patients. Single antibiotic therapy were ampicillin (50%), ceftriaxone (20.7%), cefotaxime (6.9%), chloramphenicol (10.7%). Combination antibiotic therapy were gentamicin-ampicillin (32.14%), and ampicillin-sulbactam (3.4%). The empiric antibiotic therapy regimens were ampicillin 4x250-600 mg, gentamicin 1x20-60 mg, ceftriaxone 2x350-1000 mg,

cefotaxime 3x200-400 mg, chloramphenicol 3x100 mg and 4x125 mg, ampicillin-sulbactam 4x500 mg. All antibiotics were administered mostly by intravenous injection bolus, intermitten or infusion. Drug-drug interactions was cloramphenicol-ceftriaxone and side effect of gentamicin potential.

All empiric antibiotic therapy regimens either in single or combination were in accordance with national or hospital guidelines.

**Keyword** : *antibiotic, drug utilization, pediatric, pneumonia*