

Antibiotic Resistance and Length of Hospitalization in Patients with Acute Exacerbation of Chronic Obstructive Pulmonary Disease in Dr. Moewardi Hospital

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Abstract

Backgrounds: Chronic obstructive pulmonary disease (COPD) is a health problem in the world. Morbidity and mortality of patients with COPD associated with frequent exacerbations. Exacerbation triggers many clinical conditions affecting long hospitalization. Resistance to antibiotics found in secondary infections in treated patients with COPD. The aim of this study is determine the relationship between level of resistance to antibiotics and length of hospitalization in patients with acute exacerbation of COPD.

Methods: The study used cross-sectional design and statistical analysis with chi square test. This study was conducted at Dr. Moewardi Hospital by taking medical records of COPD patients with acute exacerbation treated between January 2011 until December 2012 were 105 subjects enrolled. Resistance level of antibiotics classified of pansensitive, monodrug resistant and multidrugresistant (MDR). Duration of hospitalization 2-17 days.

Results: Among 105 subjects, the most frequent found were Klebsiella pneumonia 34.3% (36/105), Acenitobacter baumannii 18.1% (19/105), and Staphylococcus aureus 15.2% (16/105). Resistance to antibiotics was MDR 32.4% (34/105), monodrug resistant 31.4% (33/105) and pansensitive 36.2% (38/105). Comorbidities were hypertension 41.0% (43/105), heart disease 22.9% (24/105), and diabetes mellitus 8.6% (9/105). The statistical test demonstrated that resistance levels affected the length of stay with $p=0.013$.

Conclusion: The level of resistance to antibiotics affected the length of stay COPD patients with acute exacerbation. (J Respir Indo. 2014; 34: 174-9)

Keywords: resistance, length of hospitalization, COPD acute exacerbation