



Susceptibility Pattern and Empirical Antibiotic Treatment on Ventilator Associated Pneumonia in PKU Muhammadiyah Hospital Yogyakarta 2011-2014

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Introduction

Ventilator associated pneumonia (VAP) is a nosocomial infection in patients using mechanical ventilation. The prevalence of VAP as much as 9-27% with a mortality rate of $\geq 50\%$. VAP-causing microorganisms are *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Enterobacteriaceae*. Each hospital need susceptibility pattern for empirical antibiotic treatment of VAP.

Objective

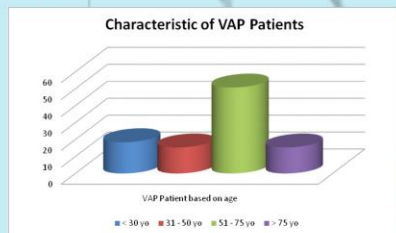
To know the susceptibility pattern and empirical antibiotic treatment on Ventilator Associated Pneumonia (VAP) in PKU Muhammadiyah Hospital Yogyakarta in 2011-2014.

Method

Descriptive observational retrospective study with cross sectional approach. Sample sputum from all inpatients diagnosed with VAP within January 2011 until October 2014, according to the medical record.

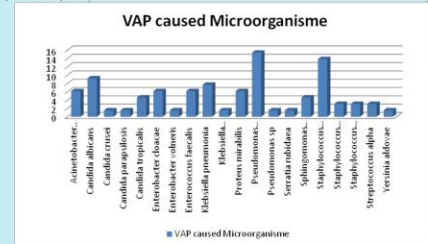
Results:

Sixty-five VAP patients 55.38% are males and 50.77% are 51-75 years old.



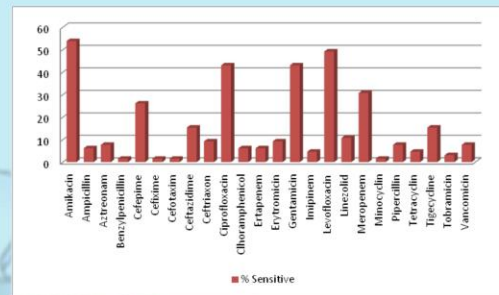
Graphic 1. Characteristic VAP Patient in PKU Muhammadiyah Hospital Yogyakarta 2011-2014 based on Age

There are four most common microorganisms isolated from VAP patients sputum samples in PKU Muhammadiyah Yogyakarta 2011-2014 : *Pseudomonas aeruginosa* (15.38%), *Staphylococcus aureus* (13.85%), *Candida albicans* (9.23%) and *Klebsiella pneumoniae* (7.69%)



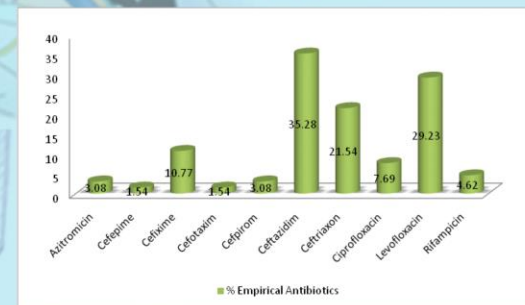
Graphic 2. Microorganism isolated from VAP patients sputum samples in PKU Muhammadiyah Hospital Yogyakarta 2011-2014

The susceptibility pattern isolate from sputum sample of VAP are Amikacin the most sensitive (53.85%) and the lowest sensitive are Cefotaxime and Minocycline (1.54%). There are four most common empirical antibiotic treatment were given by clinicians : Ceftazidim (35.28%), Levofloxacin (29.23%), Ceftriaxon (21.54%) and Cefixime (10.77%).



Graphic 3. Susceptibility Pattern of isolate from VAP patient sputum sample in PKU Muhammadiyah Hospital Yogyakarta 2011-2014

An empirical antibiotic treatment given by clinician for Ventilator Associated Pneumonia patients in PKU Muhammadiyah Hospital Yogyakarta 2011-2014 according to graphics 4



Graphic 4. The empirical antibiotic treatment given by clinician for VAP patients in PKU Muhammadiyah Hospital Yogyakarta 2011-2014

Conclusion :

Pseudomonas aeruginosa is the most common cause of VAP infection in PKU Muhammadiyah Hospital Yogyakarta, while Amikacin showed the highest sensitivity percentage and the most common choice of empirical antibiotic treatment by clinicians is Ceftazidim.

Keywords: Susceptibility pattern, Empirical antibiotics, VAP

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