
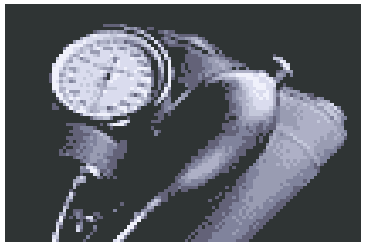
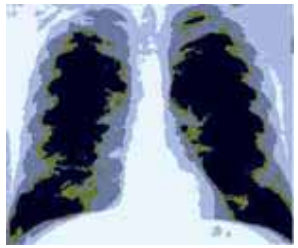

EPIDEMIOLOGY AND OUTCOME OF HOSPITAL-ACQUIRED AND VENTILATOR-ASSOCIATED PNEUMONIA AT THE PHILIPPINE GENERAL HOSPITAL CENTRAL INTENSIVE CARE UNIT

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10 Years of Excellence and Leadership in Quality Health Care for the Filipino

Introduction

- Hospital acquired pneumonia (HAP)
  - Second most common nosocomial infection leading to increased morbidity and mortality

Introduction

- Philippine General Hospital
  - Incidence of nosocomial pneumonia in different ICUs is 28%

Berba,et al.Incidence, risk factors, and outcome of HAP in critically Ill patients at the Philippine General Hospital.Philippine Journal of Microbiology and Infectious Dis.1999

Introduction

- Intubated patients
  - Have a 6 to 21-fold increased risk for ventilator-associated pneumonia (VAP)

- VAP
  - Refers to pneumonia in patients on mechanical ventilator after 48 hours of intubation

Introduction

- Bronchoscopic sampling
  - Is still the best diagnostic technique to determine the etiology of HAP/VAP

- Quantitative culture
  - Growth of at least 10^{5-6} colony forming units/mL

Fagon,et al. Invasive & noninvasive strategies for management of suspected VAP.Ann Intern Med.2000

Introduction

- ATS/IDSA Guidelines for the Management of Adults with HAP, VAP and HCAP
  - Recommends the selection of initial empiric therapy based on local patterns of antibiotic resistance

Introduction

- Philippine General Hospital
  - Quantitative cultures are not routinely done due to lack of funds
  - Choice of antibiotics are based on clinical parameters and semiquantitative cultures

Objectives

- To determine the common pathogens causing nosocomial pneumonia
- To determine the outcome of patients with nosocomial pneumonia
- To determine the attitudes of physicians on antibiotic use given the results of semiquantitative cultures of respiratory specimens

Methodology

- Cross-sectional cohort study
- Adult patients admitted at the central ICU between May 1, 2006 and July 31, 2006

Results

Age	≤ 30 30-50 50-60 >60	7% (n=3) 14% (n=6) 14% (n=6) 64% (n=27)
Sex	Male Female	59.5% (n=25) 40.5% (n=17)
Reason for admission	Stroke Malignancy CAD COPD	38% (n=16) 12% (=5) 10% (n=4) 10% (n=4)

Results

- Most common isolated organisms
  - Pseudomonas aeruginosa (43%, n=18)
  - Klebsiella pneumoniae (24%, n=10)
  - Acinetobacter baumanii (17%, n=7)

Results

- Pseudomonas aeruginosa
  - Resistant to:
    - Carbapanems (50%)
    - Cephalosporins (44%)
    - Piperacillin-Tazobactam (33%)
    - Aminoglycosides (22%)
    - Quinolones (22%)

Results

- Klebsiella pneumoniae
  - Resistant to:
    - Quinolones (40%)
    - Ampicillin-Sulbactam (20%)
    - Cephalosporins (20%)
    - Carbapenems (20%)

Results

- Acinetobacter baumanii
  - Resistant to:
    - Macrolides (43%)
    - Cephalosporins (28.5%)
    - Carbapenems (28.5%)
    - Piperacillin-Tazobactam (28%)
    - Quinolones (28%)

Results

- 76% of patients
  - Received culture-guided treatment
- Most common antibiotics used empirically
  - Piperacillin-Tazobactam
  - Cefepime
  - Meropenem

Results

- Resolution of pneumonia
  - Culture-guided group (91%)
  - Non culture-guided group (75%)
- Mortality
  - Culture-guided group (10%)
  - Non culture-guided group (28.5%)
- ICU stay
  - Culture-guided group (23 days)
  - Non culture-guided group (31 days)

Discussion

- Hospital Infection Control Unit (HICU) in Philippine General Hospital
  - Most common pathogen isolated from respiratory specimens
    - Pseudomonas aeruginosa
    - Acinetobacter baumanii
    - Klebsiella pneumoniae
  - Recommended empiric antibiotic
    - Cefepime
    - Ceftazidime
    - Piperacillin-Tazobactam

Conclusion

- There was a trend toward a better resolution of infection, lower mortality rate and shorter ICU stay in culture-guided patients
- Culture & susceptibility testing should be done early
- All institutions should have their own Infection Control Unit to promote proper antibiotic use and improve antibiotic resistance surveillance

TERIMA KASIH!