International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Impact Factor (2012): 3.358

Management of Nosocomial Respiratory Infections

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Abstract: ***Purpose:*** ***Nosocomial Pneumonia is the infection of the lower respiratory tract that occurs during or after hospitalization of patients who did not have the incubation stage of infection on admission to hospital. Nosocomial pneumonia is the leading cause of mortality due to hospital acquired infections. In this study, we aimed to determine and manage nosocomial pneumonia in intensive care unit in the University Hospital Centre "Mother Teresa", Tirana.*** ***Methods:*** ***In this study included 480 patients aged (65 ± 30) hospitalized in intensive care unit during March 2014 - October 2014.*** ***Results:*** ***In this study included 480 patients of which 18 patients resulted nozocomiale respiratory infections, 11 patients resulted nozocomiale urinary infections, 13 patients resulted in nozocomiale surgical infections and 6 patients resulted nozocomiale blood infections. All patients were examined clinically. In total there have been these tests: 18% blood cultures, 6.5% wound drainage, 30% intubation tubes, 22% aspiration tubes, 26.8% crop throat secretions and 30% uroculture. Data were collected from patients who have had fever 48 hours after admission to intensive care. The overall percentage of nosocomial respiratory infection was 37% in comparison with other nosocomial infections. Percentage of nosocomial infection was higher among males (63%) than in females (37%). The average age of these patients with surgical infections nosocomiale was (65 ± 30) years and a major cause of these infections was Pseudomonas Aeruginoza in 27% of cases.*** ***Conclusions:*** ***Nosocomial pneumonia is common in patients admitted to the intensive care unit of the University Hospital Center Central. The main recommendations should be given on diagnostic strategies, testing, antibiotic selection and duration of treatment. We also need to collect data on how the prevention of hospital infections in general and in particular nosocomial pneumonia.***

Keywords: Nosocomial pneumonia, hospital infection, strategies, management, etc.

1. Introduction

Nosocomial pneumonia is infection of the lower respiratory tract that occurs during or after hospitalization of patients who did not have the incubation stage of infection on admission to hospital. Diagnosis of this disease is based on: clinical signs, elevated temperature, purulent secretions, relevant changes in radiography and microbiological diagnosis of intubation tubes, pipes aspiration, culture throat secretions, etc. (10) Nosocomial Pneumonia is the leading cause of morbidity and also represent one of the main causes of death in some countries due to hospital acquired infections. Treatment of respiratory tract infections implies a constant search for strong and therapy represents an economic burden on health services and society. In this context, prevention of infections is absolutely necessary. A thorough understanding of the latest developments in assessment and management of nosocomial pneumonia is critical to infection control professionals and hospital epidemiologists, considering cases and the cost of this important problem of patient safety. The main recommendations are then given to diagnostic strategies, testing, antibiotic selection and duration of treatment. We also need to collect data on how the prevention of hospital infections in general and in particular nosocomial pneumonia.

1.1 The etiology of nosocomial pneumonia (11.1)

Streptococcus pneumonia and Haemophilus influenzae can cause postoperative pneumonia especially in patients who have lung disease prior.Gram negative bacilli such as Klebsiella pneumoniae, Esherichia coli, Pseudomonas aeruginosa, Serratia marcesens, Enterobacter species and Acinetobacter species.Infection with Legionella may appear hospital ventilation system or water supply system, especially in immunocompromised patients.

Other organisms as p.sh respiratory syncytial virus and other respiratory viruses, Candida albicans and Aspergillus fumigates rarely.

Pneumocystis pneumonia causes carini to immunocom promised persons, particularly those HIV-positive, but this is more a community acquired infection.

Opportunistic pulmonary diseases caused by different mycobacteria, including Mycobacterium tuberculosis may appear and be transferred to the other patients. (11)

1.2 Minimum Requirements

- Decontaminated equipment in proper order.
- Hand hygiene before and after contact with the patient.
- Preferably, the tracheal aspiration of used gloves (non-sterile) and catheter for use.
- The change gloves after each patient and procedure.

2. Methods

In this prospective study we aimed to determine and manage nosocomial pneumonias in central resuscitation. In this study included 480 patients aged (65 ± 30) hospitalized in intensive therapy during the period March 2014 - October 2014. The diagnosis of this disease is based on: clinical signs, elevated temperature, puss, relevant changes in radiography and diagnosis microbiological intubimit pipes, tubes aspiration, culture throat secretions, Blood cultures, etc. Data were collected from patients who have had fever 48 hours after admission to intensive care.

3. Results

In this study included 480 patients of which 18 patients resulted nozocomiale respiratory infections, 11 patients resulted nozocomiale urinary infections, 13 patients resulted in nozocomiale surgical infections and 6 patients resulted nozocomiale blood infections. All patients were examined clinically. In total there have been these tests: 18% blood cultures, 6.5% wound drainage, 30% intubation tubes, 22% aspiration tubes, 26.8% crop throat secretions and 30% uroculture. Data were collected from patients who have had fever 48 hours after admission to intensive care. The overall percentage of nosocomial respiratory infection was 37% in comparison with other Nosocomial infections. Percentage of nosocomial infection was higher among males (63%) than in females (37%). The average age of these patients with surgical infections nosocomiale was (65 ± 30) years and a major cause of these infections was Pseudomonas Aeruginoza in 27% of cases.

- So the study were 480 patients of which 18 patients resulted nosocomiale respiratory infections, 11 patients resulted nosocomiale urinary infections, 13 patients resulted in nosocomiale surgical infections and 6 patients resulted nosocomiale blood infections. See you nosocomiale respiratory infections constitute 37% of hospital infections and other infections nosocomiale (urinary infections, surgical infections and blood infections) constitute 63%. (Fig 1)

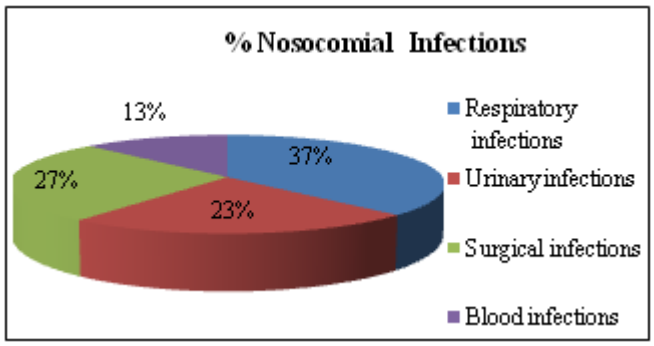

Figure 1

- So the 480 patients taking into studim18 patients resulted nosocomiale respiratory infections, which have been exposed to probes pump, endotracheal tubes, catheters aspiring and masks for inhalation with aerosol. (Fig 2)

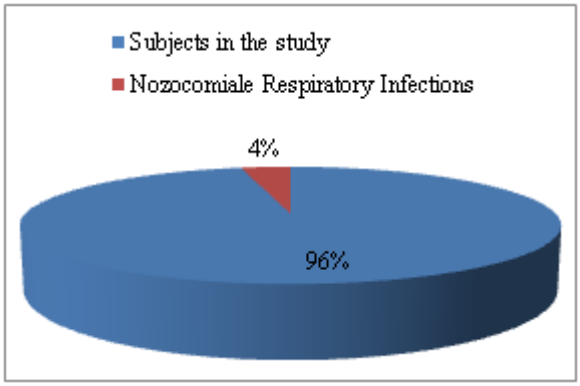

Figure 2

- All patients were examined clinically. In total there have been these tests: 18% Blood cultures, 6.5% dren wound, 30% intubimi tube, 22% aspiration tubes, 26.8% crop throat secretions and 30% urokulture. Data were collected from patients who have had fever 48 hours after admission to intensive care. (Fig 3)

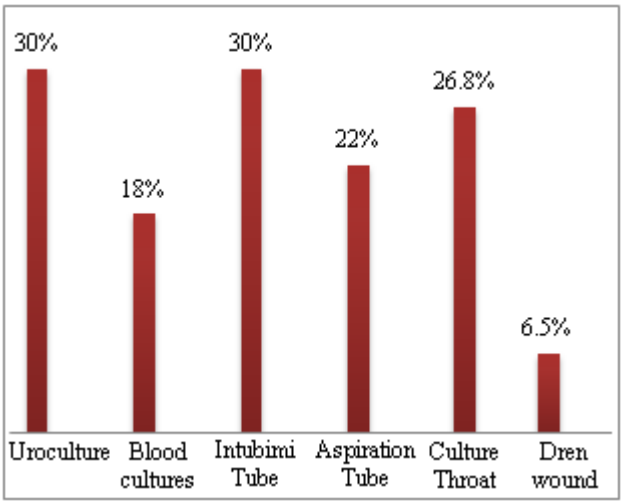

Figure 3

- Etiological cause in respiratory infections Nosocomial is Pseudomonas aeruginoza in 27% of cases as follows (Figure 4):

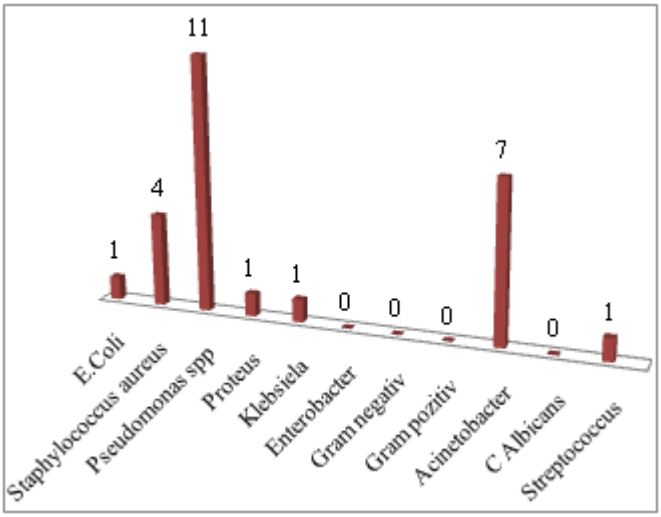

Figure 4

- The average age of affected pacinteve nosocomiale surgical infections was (65 ± 30) years and see that men have a higher percentage of women against infection from these infections. (Fig 5)

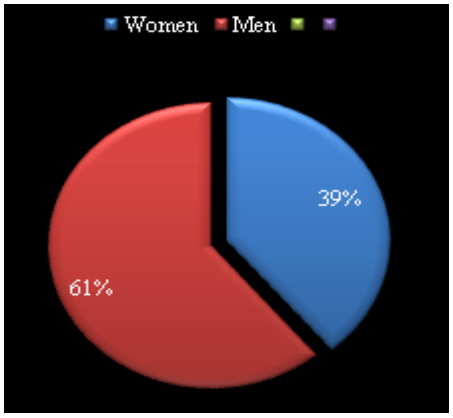

Figure 5

- The average time of stay in hospital patients nosocomiale respiratory infections (Fig 6)

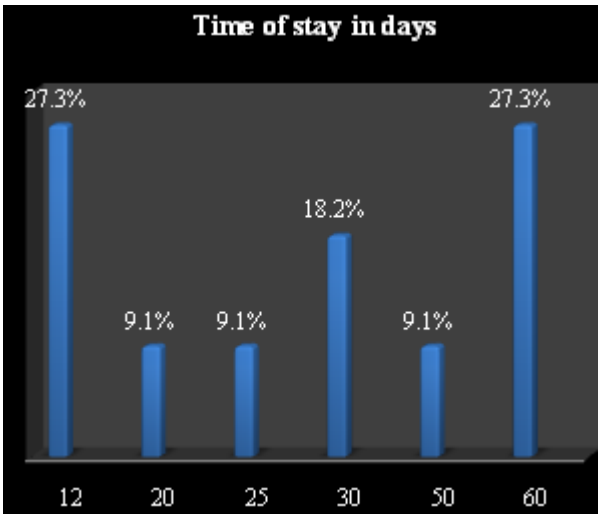

Figure 6

4. Discussions

Risk factors for nosocomial pneumonia postoperative trauma, arsons and shootings have been identified as causes of the onset of nosocomial pneumonse. The importance of initial therapy in reducing mortality in nosocomial pneumonia is reinforced by numerous studies. (8.9) New technique to study colonization and ways of spreading pathogenic organisms in the intensive care unit were added to understand how pneumonia develops, the role of infection control measures and types of strategies are necessary to prevent it. Oral decontamination, ventilation is a technique to prevent pneumonia and mortality rate associated with it. Implementation of antibiotiko therapy aims also reduce the frequency of nosocomial pneumonia. (3,5)

5. Conclusions

This prospective analysis of patients hospitalized with the diagnosis of nosocomial pneumonia, Pseudomonas aeruginoza reveals the cause of high rates of antibiotic resistance, inappropriate antibiotic therapy which then increases mortality. (11) Nosocomial pneumonia is common in patients admitted to the intensive care unit of the University Hospital Center Central. The main recommendations should be given on diagnostic strategies, testing, antibiotic selection and duration of treatment. We also need to collect data on how the prevention of hospital infections in general and in particular nosocomial pneumonia.

References

[1] File TM Jr, Tan JS. Nosocomial infection. In: Pankey GA, ed. Ochsner clinic reports on serious hospital infections, Volume 13, Number 6. Newtown, Pennsylvania, Associates in Medical Marketing, 2001.
[2] Centers for Disease Control and Prevention. Guidelines for prevention of nosocomial pneumonia. Morbidity and mortality weekly report, 1997, 46(RR–1):1–79.
[3] Fagon JY et al. Nosocomial pneumonia in ventilated patients: a cohort study evaluating attributable mortality and hospital stay. American journal of medicine, 1993, 94:281–8.
[4] Vanhems P et al. Nosocomial pulmonary infection by antimicrobial-resistant bacteria of patients hospitalized in intensive care units: risk factors and survival. Journal of hospital infection, 2000, 45:98–106.
[5] Richards MJ et al. Nosocomial infections in medical intensive care units in the United States. National Nosocomial Infections Surveillance System. Critical care medicine, 1999, 27:887–93.
[6] Rello J et al. Incidence, etiology, and outcome of nosocomial pneumonia in ICU patients requiring percutaneous tracheostomy for mechanical ventilation. Chest, 2003, 124:2239–43.
[7] Aposolopoulou E et al. Incidence and risk factors for ventilator-associated pneumonia in 4 multidisciplinary intensive care units in Athens, Greece. Respiratory care, 2003, 48(7):681–8.
[8] Strausbaugh LJ. Nosocomial respiratory infections. In: Mandell GL, Bennett JE, Dolin R, eds. Principles and practice of infectious diseases. Philadelphia, Churchill Livingstone, 2000:3020–8.
[9] Mayhall G, Mayhall CG, eds. Hospital epidemiology and infection control, 2nd ed. Baltimore, Lippincott Williams and Wilkins, 1999.
[10] Haley RW et al. The efficacy of infection surveillance and control programs in preventing nosocomial infections in US hospitals. American journal of epidemiology, 1985, 121:182–205.
[11] Bonten MJM. Controversies on the diagnosis and prevention of ventilator-associated pneumonia. Diagnostic microbiology and infectious disease, 1999, 34:199–204.
[12] Garner JS et al. CDC definitions for nosocomial infections. In: Olmsted RN, ed. APIC infection control and applied epidemiology: principles and practice. St Louis, Mosby, 1996:A1–A20.