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AN OBSERVATIONAL STUDY TO KNOW THE PREVALENCE AND ETIOLOGY OF NOSOCOMIAL INFECTIONS IN PATIENTS OF MEDICINE UNIT OF NISHTAR HOSPITAL

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Abstract:

Purpose: *To evaluate the frequency of hospital infections in patients admitted to the medical Units of Nishtar Hospital, Multan and know the causing factors in these patients.*

Study design: *An Observational study.*

Location and duration of study: *This study was conducted in the Medicine Units of Nishtar Hospital, Multan for one year duration from March 2018 to February 2019.*

Method: *More than 12 years of age patients were included who were admitted for more than 48 hours working on clinical evidence of infection.*

Results: *In the study period, 135 of 1197 patients had nosocomial infection. The frequency of hospital infections was 11,278%. Cutaneous infection (IV in situ bronchitis) 59 (43.703%), respiratory tract infection, 23 (17 037%) were observed, 31 (22 962%) and infection urinary tract infection 11 (8.148%). Other infections we identified were 11 (8.148%) in soft tissue, gastrointestinal tract and wound infections.*

Conclusion: *Patients admitted to the medical unit have a higher risk of developing a nosocomial infection from various methods. It is supposed that sterilization, disinfection of instruments, proper nursing care and careful management of invasive procedures and equipments are also good tools against life-threatening infections.*

Key words: *Hospital infections, nosocomial infection.*

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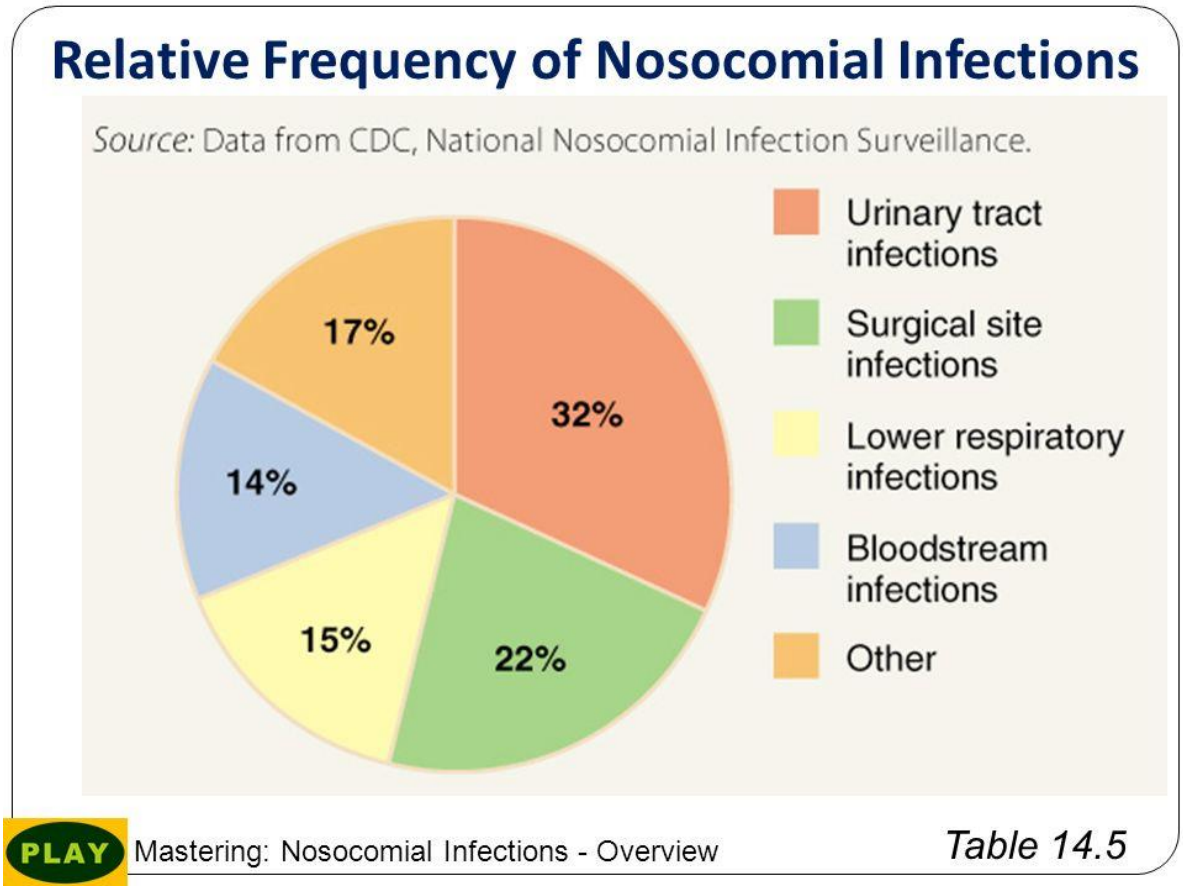
INTRODUCTION:

Hospital infection is describe as an infection developed after hospitalization in 48 hours or 48 hours after incubation. It has been shown that patients presenting in Medical ward have a high prevalence rate of 11.24% high risk of nosocomial infection. Hospital infections are caused by viral, fungal and bacterial pathogens. The pathogens most commonly observed are staphylococcus, mycobacterium tuberculi, E-coli, aspergillus, candida, trichosporon, malassezia, fusarium and pseudomonas. All are linked with higher mortality and morbidity. Measures to stop nosocomial infection in Medical ward include hand washing before and after contact with the patient and during breathing intubation, during catheter insertion aseptic technique should be observed, and immediate removal of non-necessary catheters. The aim of this analysis was to know the prevalence and nosocomial infection pattern in patients admitted to our Medical ward and to identify the etiologic agent in these cases.

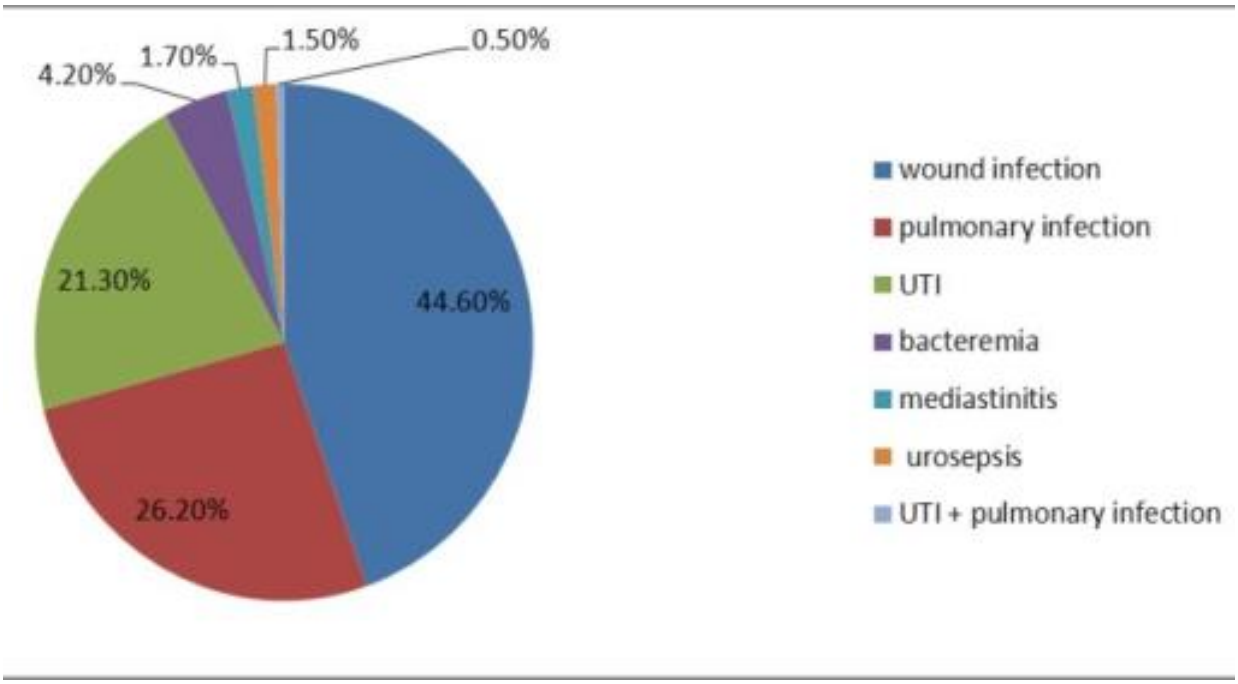
PATIENTS AND METHODS:

This hospital-based observational study was conducted in the Medicine Units of Nishtar Hospital, Multan for one year duration from March 2018 to February 2019. All patients over 12 years of age admitted to the Medical Unit II for above 48 hours and had developed clinical presentation of infection and clinical tests that confirms the diagnosis of the patient were selected for the analysis. These patients admitted via OPD or hospital emergency department. Patients admitted for less than 48 hours were excluded from the analysis. A designed proforma for data collection was used. The patients detailed history was obtained and a complete clinical examination was done. Patients were evaluated on a daily basis to evaluate the treatment response and to establish new infection development and its evidence. The temperature table was also recorded and it was regularly maintained. All baseline investigations were performed, including whole blood, blood glucose levels, urine analysis and chest x-ray image. According to the patients clinical presentation, a large number of studies were performed. The Prevalence was evaluated by the number of patients gaining infection; While the pattern was confirmed by the obtained infection type, the causing agents were evaluated by identifying the sources or pathogens causing infection. Data were recorded and analyzed in SPSS version 18.0 and frequencies, percentages, mean ± SD were calculated.



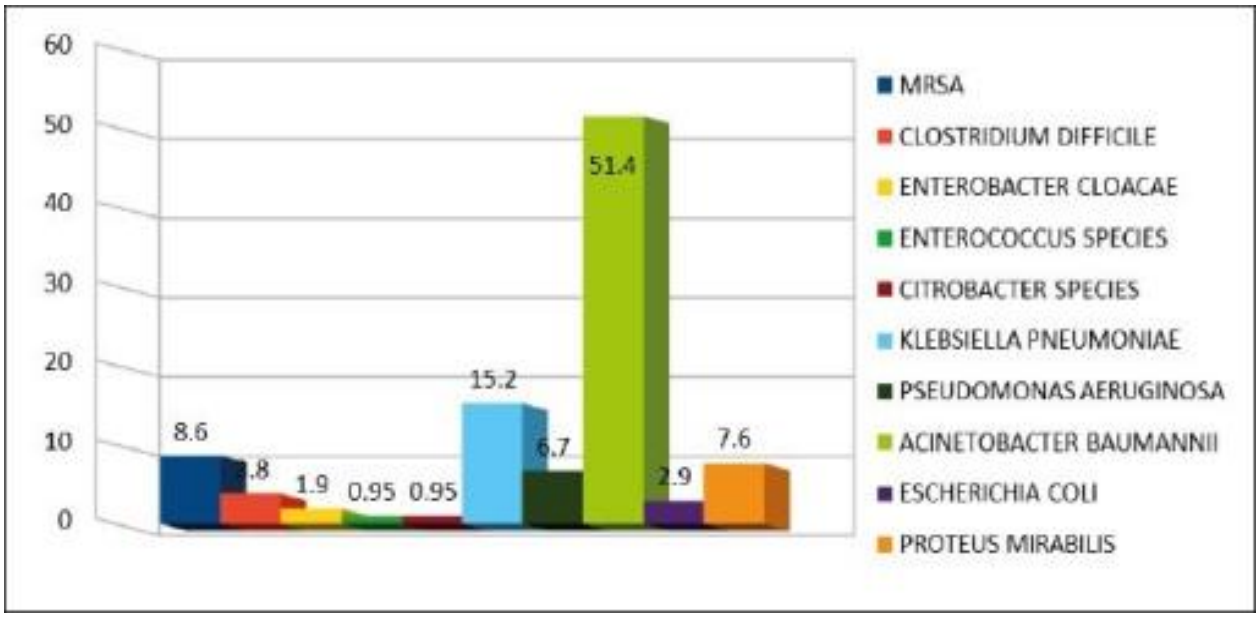
RESULTS:

During the study, 135 of 1197 patients had nosocomial infections. The frequency of hospital infections was 11.27%. Skin infection (IV in situ bronchitis) were observed in 59 (43.703%) and respiratory tract infection in 23 (17 037%), UTI in 31 (22 962%) and blood circulation infection in 11 (8.148%) patients. Other infections we identified were 11 (8.148%) in soft tissue, wound and gastrointestinal tract infections. Send appropriate samples of the involved area (blood, urine, sputum, branula catheter Foley catheter) to detect potential organisms. In most of the examples we could not identify the possible organism because the microbiology department of the hospital was not in the correct order. However, some specimens shows E.coli have been found in of urinary tract infections, branulitis Staphylococcus aureus in skin infections in respiratory tract infections (mouth ulcers) pneumococcus, Pseudomonas and klebsiala Staphylococcus epidermidus. We describe enterococci in the blood culture of several patients. No organism was found in the stool culture of the patients who developed diarrhea 48 hours after hospitalization.



DISCUSSION:

For patients with venous catheter (insertion branula), urinary bladder catheterization and stopping barriers during wound treatment, patients admitted to a medical unit with a risk of hospital infection I (patients with mouth ulcers). Medical device is the most common hospital infection followed by branulitis, urinary tract infection, pneumonia and primary infection. Common infections detected in our study were branulitis, catheter, bloodstream infection, respiratory tract infection, wound infection and gastrointestinal infections and soft tissue related urinary tract infection.



The prevalence of nosocomial infection reported in this analysis was 12.27%. The most frequent and common nosocomial infection in the intravenous catheterization area is bruculitis. In our study, 31 patients (22,962%) were diagnosed with urinary tract infection. The source of nosocomial UTIs was the placement of the Foley catheter using non-sterile techniques. Richards observes that IU are responsible for 22-31% of hospital infections in the medical / surgical intensive care unit National Hospital Infections Surveillance (NNIS, for its abbreviation in English) reported in the database. Finklestein and colleagues reported an incidence of 11% to 15% among 338 patients in a single Israeli ICU. Rosser and his colleagues have found that age (over 49 years) and catheterization are independent factors linked with the development of hospital UTI. Nosocomial pneumonia is the second most common nosocomial infection in critically ill patients and is the main cause of deaths due to hospital acquired infection. Klebsiella pneumoniae has also shown that infection occurs in the bloodstream, while a study in Brazil showed that another study has caused bloodstream infections in the US and Canada among ten major pathogens.

CONCLUSION:

In this observational study, we found that patients are at the risk of grabbing hospital infection admitted to Medical ward. Common hospital infections identified in our study were hospital pneumonia, bloodstream infections and urinary tract infections (UTI). We emphasize mutual co-operation between health care workers and the hospital in accordance with standard guidelines for preventing infection in the hospital, and in public opinion.

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