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Research Article

EPIDEMIOLOGY AND RISK FACTORS OF NOSOCOMIAL INFECTION IN ICU IN HOSPITALS AT STATE OF PUDUCHERRY

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ABSTRACT

Day by day surveillance of hospital acquired infections is a time- consuming activity. Healthcare professionals need powerful computer tools to manage and analyze these data. Such a program must include all the functions needed to manage communication with other programs in order to minimize data entry. Coherence checks are then used to validate data. Automatic production of reports, graphics or tables enables users to quickly obtain timely and representative documents regarding the evolution of specific indicators.

Key Words:

Coherence checks are then used to validate data

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INTRODUCTION

A nosocomial infection is contracted because of an infection or toxin that exists in a certain location, such as a hospital. People now use nosocomial infections interchangeably with the terms health-care associated infections (HAIs) and hospital-acquired infections. For a HAI, the infection must not be present before someone has been under medical care. One of the most common wards where HAIs occur is the intensive care unit (ICU), where doctors treat serious diseases. About 1 in 10 of the people admitted to a hospital will contract a HAI. They're also associated with significant morbidity, mortality, and hospital costs. As medical care becomes more complex and antibiotic resistance increases, the cases of HAIs will grow. The good news is that HAIs can be prevented in a lot of healthcare situation.

- Up to 48 hours after hospital admission
- Up to 3 days after discharge
- Up to 30 days after an operation
- In a healthcare facility when someone was admitted for reasons other than the infection

Symptoms of HAIs will Vary by type. the Most Common types of HAIs are

- Urinary tract infections (utis)
- Surgical site infections
- Gastroenteritis
- Meningitis

Aetiological Factors

Bacteria, fungus, and viruses can cause HAIs. Bacteria alone cause about 90 percent of these cases. Many people have compromised immune systems during their hospital stay, so they're more likely to contract an infection. Some of the common bacteria that are responsible for HAIs are:

Bacteria	Infection type
<i>Staphylococcus aureus</i> (<i>S. aureus</i>)	Blood
<i>Escherichia coli</i> (<i>E. coli</i>)	UTI
Enterococci	blood, UTI, wound
<i>Pseudomonas aeruginosa</i> (<i>P. aeruginosa</i>)	kidney, UTI, respiratory

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Of the HAIs, *P. aeruginosa* accounts for 11 percent and has a high mortality and morbidity rate. Bacteria, fungi, and viruses spread mainly through person-to-person contact. This includes unclean hands, and medical instruments such as catheters, respiratory machines, and other hospital tools. HAI cases also increase when there's excessive and improper use of antibiotics. This can lead to bacteria that are resistant to multiple antibiotics.

Risk People

Anyone admitted to a healthcare facility is at risk for contracting a HAI. For some bacteria, your risks may also depend on:

- Your hospital roommate
- Age, especially if you're more than 70 years old
- How long you've been using antibiotics
- Whether or not you have a urinary catheter
- Prolonged ICU stay
- If you've been in a coma
- If you've experienced shock
- Any trauma you've experienced
- Your compromised immune system

Your risk also increases if you're admitted to the ICU. The chance of contracting a HAI in pediatric ICUs is 6.1 to 29.6 percent. A study found that nearly 11 percent of roughly 300 people who underwent operations contracted a HAI. Contaminated areas can increase your risk for HAIs by almost 10 percent. HAIs are also more common in developing countries. Studies show that five to 10 percent of hospitalizations in Europe and North America result in HAIs. In areas such as Latin America, Sub-Saharan Africa, and Asia, it's more than 40 percent.

Some General Measures for Infection Control Include

The responsibility of HAI prevention is with the healthcare facility. Hospitals and healthcare staff should follow the recommended guidelines for sterilization and disinfection. Taking steps to prevent HAIs can decrease your risk of contracting them by 70 percent or more. However, due to the nature of healthcare facilities, it's impossible to eliminate 100 percent of nosocomial infections.

- Screening the ICU to see if people with HAIs need to be isolated.
- Identifying the type of isolation needed, which can help to protect others or reduce chances of further infection.
- Observing hand hygiene, which involves washing hands before and after touching people in the hospital.
- Wearing appropriate gear, including gloves, gowns, and face protection.
- Cleaning surfaces properly, with recommended frequency.
- Making sure rooms are well ventilated.

MATERIALS AND METHODS

Study Design

Cross sectional hospital based.

Study Area

Tertiary care centers in and around Puducherry.

Inclusion Criteria

All the patients admitted in Hospital ICUs without prior admission to hospitals in recent period.

Exclusion Criteria

All chronic patients and previously admitted on ICU.

Data Collection

Blood culture, Sputum culture and Urinary tract infection.

Antimicrobial therapy

All antimicrobials are to be administered only after Anti Microbial Sensitivity. Initially broad spectrum anti microbial are to be given.

Aim of the Study

To classify Nosocomial infection in Hospitalized patients especially in ICU .because these people has to be treated with care to improve their illness. If they are infected with nosocomial infection, they are at the risk of life.

- To define basic broad spectrum empirical therapy
- Antimicrobial foe Gram Negative bacteria
- Antimicrobial for gram positive especially staphylococcus

CONCLUSION

Our study will improve health status of the patient. It will reduce antimicrobial burden and cost. It will reduce less cost regarding antimicrobial use.

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