

Short Communication

Contamination of Patient's Medical Files in ICU: Potential Source of Nosocomial Infection

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ABSTRACT

Background-Nosocomial infections have become an increasingly recognized problem and are a significant hazard for the patients admitted in the hospital. The highest prevalence of nosocomial infections occur in busy areas of hospital such as Intensive care units. Patient's files are common inanimate objects, which have the potential to be contaminated by pathogenic bacteria, and work as fomites in spreading nosocomial infection.

Methods -The samples were collected with sterile cotton swabs from the outer surface of the selected 100 file randomly using standard collection protocol and cultured.

Result-Out of total 100 medical files studied, 73% were found to be contaminated with various organisms. The major isolates were coagulase negative Staphylococcus (CoNS) (43.8%), Pseudomonas aeruginosa (38.4%) & MRSA (5.5%).

Conclusion-Prevention of contamination of files can be achieved by strict hand hygiene practices amongst HCW before and after handling the file. If existing files are replaced with plastic coated files, periodic cleaning of these files with antiseptic solution will be easier. Monitoring of contamination of medical files will help to assess the infection control practices in healthcare settings.

Key words: nosocomial infections, CoNS, MRSA

INTRODUCTION

Nosocomial infections are becoming increasingly common worldwide. They result in morbidity and mortality of hospitalized patients. The highest prevalence of nosocomial infections occur in busy areas of hospital such as Intensive care units. The source of infectious agent and the transmission route are important elements in transmission of infection in hospital settings.^[1] Commonly used items such as stethoscopes, latex gloves and white coats

have been noted to be contaminated with various bacterial species some of which are pathogenic.^[2] Patient's files are common inanimate objects, which have the potential to be contaminated by pathogenic bacteria, and work as fomites in spreading nosocomial infections. Therefore they can act as a vehicle for cross -infection by contaminating the hands of Health care workers. The extent to which bedside files become contaminated and the range of bacterial flora attributable to contamination

in high risk areas of hospital are not known with certainty.^[2] Their role in transmission of potential pathogen has not been studied extensively.^[3]

This study was undertaken to investigate the extent of contamination of patient's medical files in ICU. Samples were collected from the patient's medical files from ICU over the period of 2 months. The samples were collected with sterile cotton swabs from the outer surface of the selected

100 file randomly using standard collection protocol. The swabs were immediately inoculated into a trypticase soy broth. After inoculation the swabs were incubated aerobically for 48 hours and then subcultured on blood agar and MacConkey's agar. The isolated organisms were identified using Gram stain, colony morphology and standard biochemical tests. *Distribution of isolates obtained was as follows:*

Table No 1: Distribution of isolates.

Bacterial isolate	Total Number	Percentage (%)
Coagulase negative <i>Staphylococcus</i>	32	43.8
<i>Pseudomonas aeruginosa</i>	28	38.4
Methicillin sensitive <i>Staphylococcus aureus</i>	04	05.5
Methicillin resistant <i>Staphylococcus aureus</i> (MRSA)	04	05.5
<i>Klebsiella pneumoniae</i>	02	02.7
<i>Acinetobacter baumannii</i>	02	02.7
<i>Citrobacter freundii</i>	01	01.4
Total	73	100

Out of total 100 medical files studied, 73% were found to be contaminated with various organisms. The predominant organism isolated was coagulase negative *Staphylococcus* (CoNS) (43.8%) followed by *Pseudomonas aeruginosa* (38.4%), MSSA (5.5%) and MRSA (5.5%) (Table No.1)

CONCLUSION

Since contaminated files can act as a source of cross infection, strict measures need to be taken to prevent contamination. As there is no protocol for cleaning the files in ICU, best means of prevention of contamination can be achieved by strict hand hygiene practices amongst HCW before and after handling the file. The practice of keeping the file on the bed should be discouraged .File should be kept separately, away from the patient's bed .If existing files are replaced with plastic coated files, periodic cleaning of these files with antiseptic solution will be easier. Monitoring

of contamination of medical files will help to assess the infection control practices in healthcare settings.

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