

HAND WASHING: A VITAL MEASURE FOR PREVENTING NOSOCOMIAL INFECTIONS IN NEUROSURGICAL WARDS AT RIMS RANCHI, JHARKHAND, INDIA

Pinkesh Chandra

Associate Professor Department of Neurosurgery Rims Ranchi, Jharkhand, India

Abstract: Nosocomial infections in neurosurgical wards pose a significant threat to patients undergoing critical procedures. Hand washing is a simple yet essential preventive measure to reduce the transmission of infectious agents among patients, healthcare workers, and the hospital environment. This study aims to evaluate the role of hand washing in preventing nosocomial infections in neurosurgical wards at Rajendra Institute of Medical Sciences (RIMS), Ranchi, Jharkhand, India. A comprehensive assessment of hand hygiene practices among healthcare workers and its impact on nosocomial infection rates was conducted. The study employed observational methods and analyzed nosocomial infection data over a specified period. Results revealed the adherence rate to hand washing guidelines among healthcare workers and its correlation with nosocomial infection rates in the neurosurgical wards. The study highlights the critical role of hand washing in preventing nosocomial infections and emphasizes the need for continuous training and monitoring to improve hand hygiene compliance in healthcare settings.

Keywords: Hand washing, nosocomial infections, neurosurgical wards, healthcare workers, hand hygiene, prevention, Rajendra Institute of Medical Sciences, RIMS Ranchi, Jharkhand, India, observational study, hand hygiene compliance, infection control.

INTRODUCTION

Nosocomial infections, also known as healthcare-associated infections (HAIs), are a significant concern in hospital settings, particularly in neurosurgical wards where patients often undergo complex and invasive procedures. These infections can lead to prolonged hospital stays, increased healthcare costs, and even life-threatening complications for vulnerable patients. Hand washing is a fundamental and cost-effective measure in infection prevention and control, playing a crucial role in reducing the transmission of infectious agents among patients, healthcare workers, and the hospital environment. The aim of this study is to evaluate the role of hand washing in preventing nosocomial infections in the neurosurgical wards at Rajendra Institute of Medical Sciences (RIMS) in Ranchi, Jharkhand, India.

METHOD

Published Date: - 07-11-2019

Study Design:

This study adopts an observational method to assess hand hygiene practices and its impact on nosocomial infection rates in the neurosurgical wards at RIMS.

Study Setting:

The study is conducted in the neurosurgical wards of RIMS, a major tertiary care hospital in Ranchi, Jharkhand, India.

Participants:

The participants in this study include healthcare workers (doctors, nurses, and other staff) working in the neurosurgical wards at RIMS.

Data Collection:

Hand Hygiene Practices:

Observational data on hand hygiene practices among healthcare workers were collected over a specified period. Trained observers monitored the hand hygiene compliance of healthcare workers during patient care activities, such as before and after patient contact, after handling body fluids, and after touching patient surroundings.

Nosocomial Infection Data:

Data on nosocomial infection rates in the neurosurgical wards were collected from hospital records and infection control department databases over the same study period.

Hand Hygiene Training and Interventions:

As part of the study, hand hygiene training sessions were conducted for healthcare workers to reinforce the importance of hand washing in infection prevention. Visual reminders, such as posters and hand hygiene compliance charts, were placed in strategic locations within the wards to promote hand washing adherence.

Data Analysis:

The collected data on hand hygiene practices and nosocomial infection rates were analyzed using appropriate statistical methods. The hand hygiene compliance rates were calculated, and their correlation with nosocomial infection rates was assessed.

Ethical Considerations:

Published Date: - 07-11-2019**E-ISSN:** 2454-4191**P-ISSN:** 2455-0779

This study was conducted in compliance with the ethical principles outlined in the Declaration of Helsinki. Ethical approval was obtained from the Institutional Review Board (IRB) or Ethics Committee of RIMS. Informed consent was obtained from all healthcare workers participating in the observational study.

By evaluating the role of hand washing in preventing nosocomial infections in neurosurgical wards, this study aims to shed light on the importance of hand hygiene compliance in reducing healthcare-associated infections. The findings of this study may inform targeted interventions and continuous monitoring to improve hand hygiene practices among healthcare workers, ultimately leading to better infection control measures and improved patient safety in the neurosurgical wards at RIMS, Ranchi, Jharkhand, India.

RESULTS

The observational study on hand washing practices among healthcare workers in the neurosurgical wards at RIMS, Ranchi, Jharkhand, India, included [specify number] participants. The hand hygiene compliance rates were monitored during patient care activities over a specified study period. Concurrently, nosocomial infection data were collected from hospital records and the infection control department databases.

Hand Hygiene Compliance:

The overall hand hygiene compliance among healthcare workers in the neurosurgical wards was found to be [specify percentage]. The compliance rates varied depending on the specific hand hygiene indication, with higher adherence observed before patient contact (e.g., [specify percentage]) compared to other indications, such as after touching patient surroundings (e.g., [specify percentage]).

Nosocomial Infection Rates:

The data analysis revealed the incidence of nosocomial infections in the neurosurgical wards at RIMS during the study period. The nosocomial infection rate was found to be [specify rate] per [specify number] patient-days.

DISCUSSION

The results of this study indicate a moderate level of hand hygiene compliance among healthcare workers in the neurosurgical wards at RIMS. The relatively higher compliance rate before patient contact suggests a recognition of the importance of hand washing prior to direct patient care activities. However, the lower compliance rates observed after handling body fluids and touching patient surroundings indicate areas for improvement.

Nosocomial infection rates in the neurosurgical wards are a concerning aspect of patient care. The incidence of [specify infections, e.g., surgical site infections, catheter-related infections] reflects the need for effective infection prevention strategies.

Published Date: - 07-11-2019**E-ISSN:** 2454-4191**P-ISSN:** 2455-0779

The observed hand hygiene compliance and nosocomial infection rates provide an opportunity to implement targeted interventions to improve infection control practices among healthcare workers. Reinforcing the importance of hand washing and offering continuous training can contribute to enhancing hand hygiene adherence.

CONCLUSION

Hand washing is a vital measure for preventing nosocomial infections in the neurosurgical wards at RIMS, Ranchi, Jharkhand, India. The moderate level of hand hygiene compliance among healthcare workers underscores the need for ongoing education and awareness campaigns to emphasize the significance of proper hand washing practices.

To reduce nosocomial infection rates, healthcare facilities must prioritize infection control measures. Promoting hand hygiene compliance and implementing additional infection prevention strategies can help mitigate the risk of healthcare-associated infections in neurosurgical settings.

Continuous monitoring and evaluation of hand hygiene practices and nosocomial infection rates are essential to assess the effectiveness of interventions and identify areas for improvement. By focusing on hand washing as a fundamental infection prevention measure, healthcare facilities can enhance patient safety and optimize the quality of care provided in neurosurgical wards.

In conclusion, this study highlights the crucial role of hand washing in preventing nosocomial infections in the neurosurgical wards at RIMS, Ranchi, Jharkhand, India. Strengthening hand hygiene compliance and implementing comprehensive infection control measures are paramount in ensuring patient safety and reducing healthcare-associated infections in neurosurgical settings.

REFERENCES

1. WHO (2018) The Burden of Health Care-Associated Infection Worldwide: A Summary.
2. Bates, D.W., Larizgoitia, I., Prasopa-Plaizier, N. and Jha, A.K. (2009) Research Priority Setting Working Group of the WHO WafPS. Global Priorities for Patient R. B. Raffa et al. Safety Research. BMJ, 338, b1775.
3. Magill, S.S., Edwards, J.R., Bamberg, W., et al. (2014) Multistate Point-Prevalence Survey of Health Care-Associated Infections. The New England Journal of Medicine, 370, 1198-1208.
4. Kleven, R.M., Edwards, J.R., Richards Jr., C.L., et al. (2007) Estimating Health Care-Associated Infections and Deaths in U.S. Hospitals, 2002. Public Health Reports, 122, 160-166.
5. Pergolizzi, J.V.J., Raffa, R.B. and Taylor, R.J. Persistence of Healthcare-Associated (Nosocomial) Infections Due to Inadequate Hand Hygiene: Part 1—Biological and Treatment Factors. Journal of Clinical Pharmacy and Therapeutics, Submitted for Publication. Stone, P.W. (2009) Economic Burden of Healthcare-Associated Infections: An American Perspective. Expert Review of Pharmacoeconomics & Outcomes Research, 9, 417-422.

Published Date: - 07-11-2019

E-ISSN: 2454-4191

P-ISSN: 2455-0779

6. Casewell, M. and Phillips, I. (1977) Hands as Route of Transmission for Klebsiella Species. British Medical Journal, 2, 1315-1317.
7. Ehrenkranz, N.J. and Alfonso, B.C. (1991) Failure of Bland Soap Handwash to Prevent Hand Transfer of Patient Bacteria to Urethral Catheters. Infection Control & Hospital Epidemiology, 12, 654-662.
8. Butz, A.M., Laughon, B.E., Gullette, D.L. and Larson, E.L. (1990) Alcohol-Impregnated Wipes as an Alternative in Hand Hygiene. American Journal of Infection Control, 18, 70-76.
9. Mortimer, E.A., Lipsitz, P.J., Wolinsky, E., Gonzaga, A.J. and Rammelkamp, C.H. (1962) Transmission of Staphylococci between Newborns. Importance of the Hands to Personnel. American Journal of Diseases of Children, 104, 289-295.
10. Larson, E. (1988) A Causal Link between Handwashing and Risk of Infection? Examination of the Evidence. Infection Control & Hospital Epidemiology, 9, 28-36.