



Wadia Journal of Women and Child Health

Brief Communication - Nursing

Preadmission checklist by nursing staff for timely implementation of isolation precautions to prevent spread of infection in a paediatric transplant centre

Swati Jadhav¹, Ravina Chile¹, Shilpa Sanjeemnoor¹, Nidhi Jain¹, Bincy Thomas¹, Ambreen Pandrowala², Prashant Hiwarkar²

¹Department of Nursing, ²Department of Bone Marrow Transplant, Bai Jerbai Wadia Hospital for Children, Mumbai, Maharashtra, India.

*Corresponding author:

Nidhi Jain,
Matron, Bai Jerbai Wadia
Hospital for Children, Mumbai,
Maharashtra, India.

Received : 15 June 2022

Accepted : 21 June 2022

Published : 01 July 2022

DOI

10.25259/WJWCH_2022_23

ABSTRACT

Introduction: Hematopoietic stem cell transplant patients are at a high risk of infections because of prolonged neutropenia and lymphopenia.^[1] Bacteraemia caused by enteric organisms is well known but they can have prolonged shedding of upper respiratory tract viruses and progression to pneumonia.^[2] These organisms are spread via direct contact and nosocomial spread has been reported.

Aim: Retrospective analysis of children transplanted in last three years after pre-admission checklist was implemented.

Method: A pre-admission checklist of 3 infection control components was formulated. The protocol involved informing the nurse in-charge of admission for transplant and handing over all infection reports by on call fellow to nurses prior to admission. Isolation precautions were planned by nurses. Nasopharyngeal swab was sent on admission to the unit and droplet, or airborne precautions are instituted based on reports. Surveillance cultures were sent weekly for CRE (Carbapenem resistant Enterobacteriaceae and Nasopharyngeal swab was sent when child has symptoms.

Result: 61 patients were analysed post institution of the checklist. 15 patients had respiratory organisms (viruses, streptococcus pneumoniae), 36 patients were positive for CRE and 2 for Methicillin resistant staphylococcus aureus in nasal swab. No respiratory organisms were transmitted. Surveillance cultures showed one suspected cross transmission of CRE. No outbreaks were reported.

Conclusion: Respiratory viral illness are associated with high morbidity with limited management options. Strict adherence to infection control measures is important to preventing outbreaks in the transplant unit. Spread of multi-drug resistant organism puts patients at high risk of developing subsequent infections with them, increasing morbidity and mortality. A simple pre-admission checklist can ensure adequate early isolation and prevent spread of infections in this severely immunocompromised cohort.

Keywords: Checklist, Infection control, Transplant unit, Outbreak management

INTRODUCTION

Hematopoietic stem cell transplant patients are at a high risk of infections because of prolonged neutropenia and lymphopenia.^[1] Bacteraemia caused by enteric organisms is well known but they

How to cite this article: Jadhav S, Chile R, Sanjeemnoor S, Jain N, Thomas B, Pandrowala A, et al. Preadmission checklist by nursing staff for timely implementation of isolation precautions to prevent spread of infection in a paediatric transplant centre. Wadia J Women Child Health 2022;1(1):62-3.



ScientificScholar®
Knowledge is power

Publisher of Scientific Journals

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms. ©2022 Published by Scientific Scholar on behalf of Wadia Journal of Women and Child Health

can have prolonged shedding of upper respiratory tract viruses and progression to pneumonia.^[2] These organisms are spread via direct contact and nosocomial spread has been reported.

AIM

Retrospective analysis of children transplanted in last three years after pre-admission checklist was implemented.

MATERIAL AND METHOD

A pre-admission checklist of 3 infection control components was formulated. The protocol involved informing the nurse in-charge of admission for transplant and handing over all infection reports by on call fellow to nurses prior to admission. Isolation precautions were planned by nurses. Nasopharyngeal swab was sent on admission to the unit and droplet, or airborne precautions are instituted based on reports. Surveillance cultures were sent weekly for Carbapenem resistant Enterobacteriaceae (CRE) and Nasopharyngeal swab was sent when child has symptoms.

RESULTS

61 patients were analysed post institution of the checklist. 15 patients had respiratory organisms (viruses, streptococcus pneumoniae), 36 patients were positive for CRE and 2 for Methicillin resistant staphylococcus aureus in nasal swab. No respiratory organisms were transmitted. Surveillance cultures showed one suspected cross transmission of CRE. No outbreaks were reported.

CONCLUSION

Respiratory viral illness are associated with high morbidity with limited management options. Strict adherence to infection control measures is important to preventing outbreaks in the transplant unit. Spread of multi-drug resistant organism puts patients at high risk of developing subsequent infections with them, increasing morbidity and mortality. A simple pre-admission checklist can ensure adequate early isolation and prevent spread of infections in this severely immunocompromised cohort.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. A Review of Infections after Hematopoietic Cell Transplantation Requiring PICU Care: Transplant Timeline Is Key. Available from: <https://www.frontiersin.org/articles/10.3389/fped.2021.634449/full> [Last accessed on 2022 Jun 13].
2. Paju S, Scannapieco FA. Oral biofilms, periodontitis, and pulmonary infections. Oral Dis 2007;13:508-12.