An investigation on the contamination of microorganisms on privacy curtains in hospital

Wei Liang

Zhenjiang First People's Hospital

Xinyang Wang

Zhenjiang First People's Hospital

Xingxing Lu

Zhenjiang First People's Hospital

Haibing Liu

Zhenjiang First People's Hospital

Dong Hou (✉ 447117215@qq.com)

Zhenjiang First People's Hospital <https://orcid.org/0000-0002-1256-9806>

Research

Keywords: privacy curtain, cleaning frequency, sampling height, microorganisms, nosocomial infection

Posted Date: February 19th, 2021

DOI: <https://doi.org/10.21203/rs.3.rs-238650/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Abstract

Background: The occurrence of nosocomial infection(NI) is closely related to the environment. As an important part of hospital environment, the contamination of privacy curtain by microorganism is an important factor of NI.

Methods: 360 samples of privacy curtains were sampled and distributed in common ward (CW) and Intensive Care Unit (ICU). Each curtain had three sampling heights, which were 100cm, 150cm and 200cm away from the ground. The samples were collected by cotton swab method and cultured in incubator for 48h.

Results: The contamination rate of curtain in CW was 48.89%, higher than that in ICU ($P < 0.05$). The contamination rate of samples at 3 months frequency was higher than that at 1 month frequency ($P < 0.05$).The contamination rate of the curtains in CW and ICU at the frequency of 1 month was lower than that at the frequency of 3 months ($P < 0.05$). In this two cleaning frequency, the contamination rate of curtains with a height of 200cm was lower than that of samples with a height of 150cm and 100cm. The main microorganisms on privacy curtains were coagulase negative Staphylococcus.

Conclusion : The contamination rate of sampling in ICU is lower than that in CW. The contamination in the higher position of the curtain is less than that in the lower part. It can reduce the contamination of microorganisms on the curtain and save the cost of hospital cleaning by removing the curtain in sections and cleaning regularly.

Full Text

Due to technical limitations, full-text HTML conversion of this manuscript could not be completed. However, the manuscript can be downloaded and accessed as a PDF.

Figures

Figure 1

Distribution of sampling points of privacy curtain.

Notes

*: There was significant difference between the two groups, $P < 0.05$.

#: There was significant difference between the two groups, $P < 0.05$.

+: There was significant difference between the two groups, $P < 0.05$.

Figure 2

Comparison of the contamination rate at different sampling points on privacy curtains at the cleaning frequency of 1 month.

Notes

*: There was significant difference between the two groups, $P < 0.05$.

#: There was significant difference between the two groups, $P < 0.05$.

+: There was significant difference between the two groups, $P < 0.05$.

Figure 3

Comparison of the contamination rate at different sampling points on privacy curtains at the cleaning frequency of 3 months.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [supplementarymaterial.pdf](#)