

REVIEWER'S REPORT

Manuscript No.: IJAR-51518

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Title: STUDY OF BACTERIAL PATHOGENS ON HIGH TOUCH SURFACES AND THEIR ANTIMICROBIAL SUSCEPTIBILITY PATTERN IN A TERTIARY CARE HOSPITAL

Recommendation:

Accept as it is..... **YES**

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		√		
Techn. Quality			√	
Clarity			√	
Significance	√			

Reviewer's Name: Dr Aamina

Reviewer's Decision about Paper: **Recommended for Publication.**

Comments (*Use additional pages, if required*)

Reviewer's Comment / Report

Abstract Evaluation

The abstract provides a succinct summary of the study's background, objectives, methods, results, and conclusion. It successfully highlights the importance of the hospital environment in the transmission of hospital-acquired infections and addresses the focus on bacterial pathogens on high-touch surfaces in a tertiary care hospital. The background clearly sets up the rationale for the study, while the methodology and results are concisely presented. The conclusion emphasizes the practical implications of the study, advocating for improved cleaning and disinfection protocols.

However, the abstract could benefit from a bit more clarity in specifying the "CoNS" acronym, as readers unfamiliar with the term may need clarification. This could be briefly addressed in the methods section as well for a more comprehensive understanding.

Introduction Evaluation

The introduction provides sufficient background information, describing the importance of bacterial

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contamination in healthcare settings and its role in hospital-acquired infections. The connection between high-touch surfaces and the spread of pathogens is well established, and relevant references have been cited to support the discussion.

The introduction could be further enhanced by elaborating on specific studies or previous findings related to hospital-acquired infections and bacterial contamination in the hospital environment. This would allow readers to see a more nuanced picture of the existing research on this topic.

Materials and Methods Evaluation

The study design, a cross-sectional study, is clearly described, including the specific wards sampled and the surfaces from which swabs were collected. The use of sterile moist swabs and standard microbiological techniques, such as Gram staining, culture on blood and MacConkey agar, and antimicrobial susceptibility testing as per CLSI guidelines, is appropriately detailed.

However, it would be helpful to provide more context on why the specific wards were chosen and if there were any particular considerations for sampling the surfaces mentioned (e.g., high-touch frequency). This additional context could better inform the study's relevance to its intended scope.

Results and Discussion Evaluation

The results are clearly presented, with specific data regarding bacterial growth and the identification of pathogens. The predominance of CoNS (68%) is highlighted, along with other pathogens such as *Staphylococcus*, *Acinetobacter* spp, and *Proteus*. The discussion touches on the fact that most isolates were sensitive to ciprofloxacin and gentamicin and resistant to penicillin, which is a valuable insight into the antimicrobial resistance profile of these bacteria.

The discussion would benefit from more detailed analysis and interpretation of the findings, particularly regarding why CoNS was the predominant pathogen and the potential implications of antibiotic resistance. Some comparison to similar studies on high-touch surfaces in hospital settings could also help contextualize the results and provide a broader understanding of the issue.

Clarity and Presentation

The paper is well-written and clear. The language is formal and appropriate for an academic study, with technical terms used correctly. The information is presented logically, from the background to the methodology and results, allowing for easy comprehension of the study's objectives and findings.

A minor suggestion is that some of the technical terms like "CoNS" could be written in full form at least once to ensure that readers unfamiliar with the abbreviation can fully understand the context.

Contribution and Relevance

The study provides valuable data on the bacterial contamination of high-touch surfaces in a hospital environment, an area of critical importance for infection control and prevention. The results of this study

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underscore the importance of regular disinfection practices in hospitals, especially on frequently touched surfaces. The research is highly relevant for improving hospital hygiene standards and could contribute to better infection control protocols.

The antimicrobial susceptibility patterns highlighted in the study are also crucial for understanding the resistance profiles of bacterial pathogens commonly found in hospitals, which is a key concern in healthcare settings globally.

Suggestions for Improvement

- Provide more detailed interpretation of the findings, especially in the discussion section, to highlight the significance of the study in the broader context of hospital infection control.
 - Offer comparative data from other studies or regions to enrich the analysis and support the conclusions.
 - Clarify the specific rationale behind choosing the particular wards and surfaces sampled for a deeper understanding of the study's scope.
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Overall Evaluation

This paper provides an important contribution to the field of hospital infection control by assessing bacterial contamination on high-touch surfaces in a tertiary care hospital. The methodology is sound, and the results present valuable insights into the pathogens prevalent in the hospital environment. While the study is well-organized and informative, additional depth in the discussion and comparison to other research would enhance the overall analysis. The study's findings offer clear recommendations for improving hospital hygiene practices, making it a relevant and significant piece of research in the field.