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# **REVIEWER'S REPORT**

Manuscript No.: IJAR-52016

Date: 31/05/2025

Title: Profile of Bacterial Pathogens in Surgical Site Infections and their Antibiogram in a Tertiary Care Hospital in Southern India

Recommendation:	Rating	Excel.	Good	Fair	Poor
Accept as it is	Originality		~		
Accept after minor revision	Techn. Quality		$\checkmark$		
Do not accept ( <i>Reasons below</i> )	Clarity		$\checkmark$		
± ` ,	Significance	$\checkmark$			

Reviewer Name: Dr. S. K. Nath

Date: 31/05/2025

# **Reviewer's Comment for Publication:**

The study underscores that gram-negative bacteria, particularly Klebsiella and E. coli, are the predominant pathogens in surgical site infections in the hospital studied, with high susceptibility to carbapenems. These findings emphasize the importance of antimicrobial stewardship, especially regarding the judicious use of third-generation cephalosporins, to prevent the development of multidrug-resistant organisms. Regular monitoring of pathogen profiles and susceptibility patterns is vital to optimize infection management and reduce postoperative morbidity associated with SSIs.

# **Reviewer's Comment / Report**

## Strengths:

- The study provides valuable local epidemiological data on the bacterial profile and antibiotic susceptibility patterns in surgical site infections, helping tailor antimicrobial therapy in the specific hospital setting.
- It includes a sizable sample size (400 samples), with detailed microbiological analysis and susceptibility testing following standardized CLSI guidelines.
- The identification of predominant pathogens (Klebsiella, E. coli, S. aureus) and their antibiotic responses offers practical guidance for clinical decision-making.
- The research highlights the high effectiveness of carbapenems (Imipenem, Meropenem) against gramnegative bacteria, informing effective treatment options.

## Weaknesses:

- The study is limited to a single tertiary hospital, which may affect the generalizability of findings to other regions or hospital settings.
- There is limited information on patient-related factors (such as comorbidities, prior antibiotic use) that could influence infection rates and resistance patterns.
- The data on gram-positive bacteria, particularly S. aureus, comprises a small number of isolates (only 10%), which may limit the robustness of conclusions regarding their antibiotic susceptibility.
- The study does not explore molecular mechanisms of resistance, which could provide deeper insights into the resistance patterns observed.
- The cross-sectional design limits conclusions about causality or the effectiveness of intervention strategies over time.