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REVIEWER'S REPORT

Manuscript No.: IJAR-52016 Date: 02-06-2025

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

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*)
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Reviewer's Comment / Report

Research Importance:

This study addresses a critical clinical issue—surgical site infections (SSIs)—which remain a major cause of postoperative morbidity and mortality globally. By focusing on the microbial profile and antibiotic susceptibility patterns in a tertiary care hospital in Southern India, the study contributes valuable regional data that can inform effective infection control measures and antibiotic stewardship.

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Abstract Summary:

The abstract clearly states the background, objective, methodology, and key findings. It reports culture positivity rates, the predominance of Gram-negative pathogens especially Klebsiella pneumoniae and E. coli, and the susceptibility patterns to key antibiotics such as carbapenems and beta-lactam/beta-lactamase inhibitor combinations. The conclusion emphasizes the predominance of Gram-negative bacilli and the importance of ongoing surveillance of pathogens and resistance trends.

Methodology:

The study used a substantial sample size of 400 pus samples from suspected SSI cases, processed according to standard microbiological protocols. The use of the Modified Kirby-Bauer disc diffusion method following CLSI guidelines for antimicrobial susceptibility testing ensures reliability and comparability of results. The methodology is appropriate for the objectives of the study.

Results and Data Presentation:

The findings that 45% of samples showed positive cultures and the distribution of isolates provide clear insight into the pathogen profile. The predominance of Klebsiella pneumoniae among Gram-negative isolates and Staphylococcus aureus among Gram-positive isolates is consistent with common clinical observations. The susceptibility data highlighting the efficacy of imipenem, meropenem, piperacillin/tazobactam for Gram-negatives, and linezolid and clindamycin for Gram-positives, offers practical clinical relevance.

Scientific Context and Relevance:

The introduction provides a concise background on the clinical and public health significance of SSIs. It places the problem within the global healthcare-associated infections framework and highlights the continued challenge despite advances in prophylaxis and aseptic techniques. The reference to the duration criteria for SSIs adds clarity to the case definitions used.

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Contribution to Knowledge:

This study contributes region-specific microbiological data which is crucial for local empirical therapy guidelines and antimicrobial stewardship programs. The antibiotic susceptibility patterns documented help guide clinicians in choosing effective therapies and support infection control policies to combat antimicrobial resistance.

Clarity and Organization:

The manuscript is clearly organized and written in a scientific and accessible manner. The abstract, introduction, methods, results, and conclusion sections flow logically and present the information succinctly.

Overall Evaluation:

This research provides important clinical microbiology insights into SSIs in a tertiary care setting in Southern India. The robust sample size, standard methodology, and clear reporting of microbial patterns and antibiotic sensitivities make it a valuable contribution to the field of infection control and hospital epidemiology.
