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REVIEWER'S REPORT

Manuscript No.: IJAR-50769 Date: 24-03-2025

Title: The prevalence of tuberculosis among patients with silicosis in the southeastern part of Rajasthan,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

General Overview: This study provides valuable insight into the prevalence and antimicrobial susceptibility patterns of Salmonella species isolated from blood specimens at a tertiary care hospital. The research methodology, including blood culture processing, identification, antibiotic susceptibility testing, and serotyping, is well-documented. The study spans two years, making its findings relevant for tracking resistance trends over time.

Key Strengths:

1. **Comprehensive Data Collection:** The study encompasses a large sample size of 2045 blood cultures, providing significant statistical power to its conclusions.
2. **Robust Methodology:** The use of automated systems (BacT/ALERT, Vitek-2 compact) for identification and susceptibility testing enhances the reliability of the findings. The inclusion of conventional methods (Kirby-Bauer Disk Diffusion) ensures validation of results.
3. **Diverse Analysis:** The research evaluates susceptibility to multiple antibiotics, including amoxicillin/clavulanic acid, fluoroquinolones, third-generation cephalosporins, carbapenems, and colistin, making the antibiogram comprehensive.

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4. **Clinical Relevance:** The study emphasizes the increasing antimicrobial resistance in *Salmonella typhi* and *Salmonella paratyphi A*, particularly reduced susceptibility to ciprofloxacin, which is crucial for guiding empirical treatment strategies.
5. **Public Health Implications:** The study underlines the importance of continuous monitoring and updating treatment guidelines to ensure optimal antibiotic stewardship and combat resistance trends.

Findings and Observations:

- *Salmonella typhi* (73 isolates) and *Salmonella paratyphi A* (15 isolates) were the predominant species, with a minor presence of *Salmonella enterica* (2 isolates).
- Multidrug-resistant organisms (MDROs) constituted 24.45% of isolates, while 75.55% were non-MDROs.
- High resistance to ciprofloxacin was noted in both *S. typhi* (36%) and *S. Paratyphi A* (100%), signaling the need to reconsider fluoroquinolones as first-line therapy.
- Ceftriaxone remained effective in 89% of *S. typhi* and 73.5% of *S. paratyphi A* cases.
- Carbapenems demonstrated high efficacy and should be reserved for severe cases to prevent resistance development.
- Colistin was found effective against multidrug-resistant strains, reinforcing its role in resistant infections.

Conclusion: The study effectively underscores the increasing resistance to fluoroquinolones and supports the continued efficacy of third-generation cephalosporins, amoxicillin/clavulanic acid, and piperacillin/tazobactam for empirical treatment. The careful use of carbapenems and colistin is emphasized for severe infections. The findings advocate for ongoing surveillance of antimicrobial resistance trends and judicious antibiotic use to mitigate the risk of resistance escalation.

Final Remarks: This research contributes significantly to understanding Salmonella resistance patterns and provides crucial data for optimizing treatment strategies. The study's methodology, data analysis, and conclusions are well-structured and clinically relevant, making it a valuable resource for healthcare practitioners and microbiologists.