Infection and Drug Resistance

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RESPONSE TO LETTER

Intrinsic Resistance: A Significant Characteristic in Evaluating Antibiotic Sensitivity Pattern [Response to Letter]

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Dear editor

We would like to thank the readers and their valuable comments suggested. We have carefully reviewed their comments and responded to each comment one by one as follows.

(a) This study reported *Providencia stuartii* as 100% sensitive (only one strain isolated and tested) to Ampicillin and Gentamicin whereas *P. stuartii* is considered intrinsically resistant to several antibiotics including Ampicillin, Gentamicin, and Tobramycin.[2,3] The bacteria with intrinsic resistance to antibiotics should be reported as "Resistant" only.[2] Moreover, intrinsic resistance is highly important as it along with another resistance mechanism may result in poor clinical outcomes.[4,5]

Responses: Thank you for your insightful comments. Notably, *Providencia stuartii* is a known drug resistance opportunistic pathogen. However, no documented evidence reveals *Providencia stuartii* is intrinsically resistant to stated antibiotics (Ampicillin, Gentamicin, and Tobramycin). There is a text on CLSI guidelines that stated *Providencia stuartii* should be considered resistant to gentamicin and tobramycin but not intrinsically resistant to amikacin. This sentence means that if the organism is resistant to ampicillin, Augmentin, cephalosporin I, tetracycline, Nitrofurantoin, Polymyxin, and colistins, the organism should be considered drug-resistant.[1–3] This evidence is supported by a recently published work 51.3%, 51.3% of sensitivity for Gentamicin, and Tobramycin among 76 isolates, respectively.[4] More than 60% of *P. stuartii* isolates were found to be sensitive to aminoglycosides (gentamicin, streptomycin, and tobramycin), penicillin (amoxicillin, Augmentin, and ampicillin).[5–7] This substantial evidence revealed that *P. stuartii* is not intrinsically resistant to the aforementioned antibiotics (Ampicillin, Gentamicin, and Tobramycin) at this time.

(b) Further, this study reported 16.7% (1 out of 6 strains) resistance in *Streptococcus pneumoniae* to penicillin. However, CLIS guidelines have not recommended reporting penicillin-resistant *S. pneumoniae* strains based on disk diffusion method(s).[2]

Responses: Thank you for raising important comments. Oxacillin disk is used as a surrogate antibiotic susceptibility test against penicillin for *Streptococcus pneumoniae*. Predicts penicillin susceptibility if the oxacillin zone is ≥20 mm with the disc diffusion method. If the oxacillin zone is ≤19 mm, penicillin MIC must be done. As a result, it proposed groupings of antimicrobial agents approved for clinical use and should be considered for testing and reporting on fastidious organisms with disk diffusion method with Oxacillin disk.[1–3]

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NCCLS also recommends that all invasive S. pneumoniae isolates found to be "possibly resistant" to beta-lactams (ie, an oxacillin zone size of less than 20 mm) by oxacillin screening should undergo further susceptibility testing by using a quantitative MIC method acceptable for penicillin, extended-spectrum cephalosporins, and other drugs as clinically indicated.[8]

(c) The study was started in January 2019 but the authors had used CLSI M100 guidelines of 2017. In the modern world of increasing anti-microbial resistance, CLSI updates M100 guidelines on yearly basis introducing a variety of antimicrobial combinations against multi-drug and pan-drug resistant isolates. Since the author is dealing with antibiotic susceptibility patterns, so, the latest CLSI guidelines must have been used. If still, authors want to adhere to old CLSI guidelines then a short explanation in the published paper might be of great importance.

Response: Thank you for your comment. We agree that each experiment should be carried out by the CLSI criteria, which were just released. At the time of the data collection, the new version was not available freely. Unless there was a modification in the amended version of the guideline, which did not result in any changes, whether we use the new version or the old one.[1–3] This holds true for this particular case.

Disclosure

The authors declare no conflicts of interest in this communication.

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