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Correspondence

Phenotypic screening of resistance mechanism in *Staphylococcus aureus*

Sir,

Apropos article on antibiotic resistance genes by Duran *et al*[1]. I have the following observations. Though the authors have done an excellent job of genotyping resistance mechanism in *S. aureus*, they failed in phenotypic screening of these isolates. Considering the fact that most laboratories can not afford to perform PCR, phenotypic screening methods remain the backbone for detection of resistance mechanism in clinical isolates.

(1) The incubation temperature for oxacillin disc diffusion (DD) is 33-35°C, not 37°C. Testing at temperatures above 35°C may not detect MRSA[2].

(2) The reporting of 30 mecA positive oxacillin sensitive *Staphylococcus aureus* (OS-MRSA) must be due to wrong incubation temperature.

(3) Oxacillin DD has a sensitivity of only 91 per cent and specificity of only 58.9 per cent while cefoxitin DD has sensitivity and specificity of 97.8 and 100 per cent, respectively[3].

(4) Use of cefoxitin DD method for detection of MRSA would have reduced the number of false negative isolates (OS-MRSA).

(5) Though the authors have genotyped the erythromycin resistance gene but they never made an effort to detect inducible resistance to clindamycin which has got immense clinical significance.

(6) Authors have used 16SrDNA (internal control) and *femA* (*S. aureus* identification) primers but have not explained the reason for using these.

(7) Antibiotic resistance in *S. aureus* should always be discussed under methicillin resistant and sensitive *S. aureus* (MRSA and MSSA) for better clarity.

(8) Nitrocefin disc test should have been used to test for beta lactamases.

(9) MIC_{50} and MIC_{90} should have been calculated rather than just mentioning the MIC range.

(10) In Table IV, fourth column, the heading should have been "Number of blaZ PCR negative isolates".

(11) CLSI has done away with vancomycin DD and recommends only MIC testing [2]. Therefore, the data presented in Table II on vancomycin susceptibility based on DD are not valid.

(12) The authors' view that phenotypic methods for screening MRSA require at least 24 h for evaluation of results is unfounded as CLSI recommends 16-18 h for cefoxitin DD method[2].

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References

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