Letter to Editor

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Biofilm Production Correlating with Multidrug Resistance Among Clinical Isolates of *Acinetobacter baumannii*

Microbiology Section

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Dear Editor,

The original research paper by Gitanjali Kailas Badave [1], was really interesting, where the authors have studied antimicrobial susceptibility patterns and correlated the resistance profile with bio-film production in various clinical isolates of *Acinetobacter baumannii*. The authors have included isolates from blood, cerebrospinal fluid and other specimens that include urine, endotracheal secretions, pus from wounds and others. The selection of the clinical samples is impressive that includes *Acinetobacter baumannii* strains isolated from deep seated infections as well as superficial infections. The study revealed high rates of multidrug resistance (90%) and 62.5% isolates were found positive for bio-film production. *Acinetobacter* spp are a group of saprophytic bacteria responsible for serious nosocomial infections. Extended spectrum beta lactamase (ESBL), and carbapenemase production is already reported in the literature as also evidenced by the study results wherein the authors observed > 30% isolates were showing resistance to imipenem.

The authors should have tested the susceptibility profile of multidrug resistant *Acinetobacter baumannii* against colistin, polymixin B and tigecycline and correlate with their ability to produce biofilms as these are the antimicrobial agents which are employed to treat infections caused by multi-drug resistant bacteria including both Gram-negative and Gram positive bacteria [2-7]. The study should also have concentrated on identifying the extent of biofilm production among *Acinetobacter baumannii* isolates from deep infections (blood, cerebrospinal fluid) and compare that with isolates from superficial infections (pus from wounds and others). The bio-film activity of the strains isolated from invasive infections may be more than that of isolates from superficial infections conformation of which may require further extensive research [8, 9].

The available literature clearly suggests that most of the infections caused by *Acinetobacter baumannii* were in severely debilitated individuals, patients in intensive care units and usually nosocomial Infections where multi-drug resistance is a serious problem. Bio-film production added to drug resistance must be considered as a serious problem [10]. Further research should be concentrated on the genetic and molecular mechanisms associated with the formation of a biofilm [11]. Studies in future also must also look in to the other mechanisms that bacteria utilize to form biofilms which include quorum sensing and the interactions between bacterial biofilms and the human cells/tissue [12,13]. Biofilm producing abilities must be studied among various other fungal and bacterial species including Gram negative bacteria like *Helicobacter pylori* and Gram positive bacteria like *Enterococcus* spp [8,9,14,15].

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