

2nd Annual Congress on
MICROBIOLOGY AND MICROBIOLOGISTS
&
6th International Conference on
MYCOLOGY AND FUNGAL INFECTIONS

October 07-08, 2019 | Madrid, Spain

Correlation between Biofilm Formation and the presence of extended spectrum β -lactamase bla *PER1* gene in multiple drug resistant clinical isolates of *Acinetobacter baumannii*

Nouran Magdy Mohamed Moustafa

Dar Al Uloom University, KSA

Statement of the Problem: *Acinetobacter baumannii* (*A. baumannii*) is responsible for most hospital acquired infections. Among the most important *A. baumannii* virulence factors, is its ability to produce biofilm, which relates to its high degree of antibiotic resistance and survival in hospital environment.

The purpose of this study is to identify the ability of different *A. baumannii* isolates to produce biofilm, and whether this correlates to multidrug resistance and the presence of blaPER-1 gene.

Methodology & Theoretical Orientation: A total of 30 isolates of *A. baumannii* were subjected to susceptibility testing by disc diffusion method for 10 clinically relevant antibiotics followed by phenotypic detection of ESBL production by double disc synergy test (DDST). MIC for imipenem was performed by E-test. Screening for biofilm formation was done by microtitre plate assay. The presence of blaPER-1 was investigated by PCR.

Finding: *A. baumannii* isolates showed high rate of resistance to the tested antimicrobials. 97.6% were ESBL producers. Sixteen isolates (53.3%) were biofilm producers. There was no significant relation between biofilm formation and MDR. blaPER-1 gene was detected in fifteen isolates (50%) but showed non-significant correlation with biofilm formation and ESBL production.

Conclusion: This study demonstrates the increasing likelihood of *A. baumannii* isolates to form biofilms. There is no significant association between biofilm formation, MDR and blaPER-1 gene.

nouran.m@dau.edu.sa