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Biofilm formation and antibiotic resistance patterns of *pseudomonas aerogenosa* isolated from different clinical sources

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Abstract:Aim: In the present study, we have assessed of methodological approach in microbial resistance to antibiotic, and evaluated of biofilm formation by thirty five clinical isolates of *pseudomonas aerogenosa*from different sources.
Method: the assays were performed to determine the antimicrobial sensitivity by the standard Kirby Bauer's disc diffusion method, using Mueller Hinton agar; the quantitative and qualitative biofilm formation assays were done in microtiter plate and tube method.
Results : Most isolated of *Pseudomonas aerogenosa*Werefrom the urine (28.57%), followed by wound and burn swab as (22.85 and 20)% respectively, so (94.3%) of *pseudomonas aerogenosa* isolates were form biofilm, but (5.7%) non- form biofilm by microtiter plate assay , as well as by tube method the 82.8% of *pseudomonas aerogenosa* isolates were form biofilm whilst 6 isolates (17.2%) were non- form biofilm As well as these bacteria were resistance to the most of tested antibioticsm which showed high resistance percentage (91.4%) to Ciprofloxacin also resistance (65.7%) to Amoxicillin/clavulanic acid; Cefotaxime and Nitrofurantoin, but high susceptible (97.1%) to both Norfloxacin and tobramycin, so 10 isolate of *P. aerogenosa* form strong biofilm and resistance to Amikacin, aw well as 31 and 22 isolate of pseudomonas form strong biofilm were resistance to Ciprofloxacin and Cefotaxime respectively , whilst only 2 isolate of *P. aerogenosa* form Moderate biofilm were resistance to Amikacin; Amoxicillin/clavulanic acid; Gentamycin and Nitrofurantoin respectively.
Conclusion: These conclusions indicated that resistance of antibiotics were higher among strain of *P. aerogenosa* that formed biofilm , as compared to non -form biofilm.
Key word: *pseudomonas aerogenosa*; biofilm; antibiotic resistance.

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