PHENOTYPIC DETECTION OF THE PRODUCTION OF BIOFILM FOR CLINICAL ISOLATES OF *Pseudomonas aeruginosa* IN TERTIARY HOSPITALS OF RECIFE-PE

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Pseudomonas aeruginosa is one of the main organisms responsible for causing infections related to health care, mainly in immunosuppressed patients or with underlying diseases. The biofilm production is an important mechanism for the survival of these microorganisms and its association with antibiotic resistance is a challenge to treat the patient. The objective of this study was to detect phenotypically the production of biofilm in clinical isolates of multidrug-resistant *P. aeruginosa* (MDR) and multidrug-sensitive (MDS) from tertiary hospitals in Recife-PE. Phenotypic detection of biofilm production was performed by two techniques: the first being the seeding method Congo Red agar (AVC) evaluating the ability of *P. aeruginosa* to produce capsule as presumptive test for biofilm formation. The isolates were inoculated in the middle AVC and incubated at 37 ° C for 24 hours. After this period, biofilm-producing colonies that were considered showed staining dark or blackish red with dry or crystalline consistency and not producing the biofilm showed that the red color of colonies with smooth and dark aspect in the center.The second technique used for biofilm detection described by Stepanović et al, (2000), with some modifications, where the adhesion was evaluated ability of *P. aeruginosa* isolates from the polystyrene plate 96 containing flat bottom microtiter wells, in triplicate. The plates were incubated at 37 for 24 hours. After this period, the plate was performed processing and reading the absorbance in an ELISA reader. Among the 40 isolates studied, 50% (20/40) were MDR and 50% (20/40) MDS. Through the technique of AVC 7.5% (3/40) of the isolates were considered biofilm producers, in the second technique, described by Stepanović 77.5% (31/40) of the isolates were biofilm producers, thus demonstrating to be a more technical effective than AVC technique. Thus, the analysis of biofilm production by these isolates, as well as the susceptibility profile of these bacteria front antimicrobial, strengthen the data to carry out more effective action to combat and control of hospital infections.

Keywords: *Pseudomonas aeruginona*, biofilm, related infections Health Service.