

Antibiotic Susceptibility and Molecular Analysis of *Acinetobacter Baumannii* Strains Isolated from Three Teaching Hospitals by REP-PCR And ERIC-PCR

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Background & Objectives: In this study Antibiotic resistant patterns and molecular analysis of *Acinetobacter baumannii* strains isolated from three teaching hospitals by REP-PCR and ERIC-PCR were examined.

Methods: One hundred and twenty *Acinetobacter baumannii* isolates were obtained from three teaching hospitals in Tehran. The source of these isolates included blood, urine, wound, and respiratory tract. After detection of *Acinetobacter baumannii* by biochemical Methods, their susceptibilities to 17 antibiotics was tested and chromosomal DNA was extracted by standard phenol/chloroform Methods. REP-PCR was carried out using Rep 1R- I and Rep 2-I primers, also ERIC-PCR was done by using ERIC -1R and ERIC - 2. The PCR product was run and visualized in 1.5% agarose gels stained with ethidium bromide.

Results: Analysis of antibiotic resistance patterns showed that All *Acinetobacter baumannii* which isolated in this study were multi-drug resistant isolates. This study showed that all *A. baumannii* isolates are 100 % resistance to at least eleven used antibiotics. One hundred and Twenty *Acinetobacter baumannii* isolates were analyzed by REP-PCR Methods. PCR Product sizes were between 200-3500 bp and 12 different PCR patterns were detected by REP-PCR, of which 7 were obtained for single isolates. The most common pattern was observed among 57 (47.5%) isolates. By ERIC-PCR Methods 13 patterns were observed.

Conclusion: According to results, because of the presence and spread of multi-drug resistant *Acinetobacter baumannii* isolates in the hospitals, more care should be taken for prevention of nosocomial infections. Results of this study showed that some of strains have similar pattern by REP-PCR and ERIC-PCR, it is assumed that these strains have the same origin.

Keywords: *Acinetobacter Baumannii*, Molecular Typing, Iran