

Dissemination of Class 1, 2 And 3 Integrons Among Different Multidrug Resistant Isolates of *Acinetobacter baumannii* in Tehran Hospitals, Iran

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Background & Objectives: In this study dissemination of Class 1, 2 and 3 Integrons among Different Multidrug Resistant isolates of *Acinetobacter baumannii* in Tehran hospitals were examined.

Methods: A total of 100 non-duplicate *Acinetobacter baumannii* isolates were collected from different hospitals in Tehran and were confirmed as *A. baumannii* by conventional biochemical and API testing. Antimicrobial susceptibility of these isolates was checked by a disk diffusion Methods in accordance with CLSI guidelines. The isolates were then detected as carrying class 1 and 2 integron gene cassettes by PCR evaluation and then genotyped by REP-PCR.

Results: More than 50% (n = 50) of the isolates were multidrug resistant. The results showed that more than 80% of all multidrug resistant *A. baumannii* strains carry a class 1 integron. Distribution of IntI 1 and IntI 2 among *A. baumannii* isolates was 58% and 14%, respectively. Analysis of a conserved segment of class 1 integron showed a range from 100 bp to 2.5 kb. REP-PCR fingerprinting showed more than 20 genotypes among *A. baumannii* strains. There was no relationship between REP genotypes and the distribution of different classes of integrons.

Conclusion: This is a comprehensive study on the distribution of different classes of integrons among *A. baumannii* in Iran. Considering the exact role of integrons in coding drug resistance in bacteria, the findings of this study could help us find antimicrobial resistant mechanisms among *A. baumannii* isolates in Iran.

Keywords: *A. Baumannii*; Hospital Isolates; Integron Class; Iran