

Frequency of Class 2 Integrons among Clinical Strains of *Salmonella enterica* Isolated in Tehran

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ABSTRACT

Background and objectives: Antimicrobial drug resistance is increasing among *Salmonella* spp. and causes significant therapeutic problems in the treatment of diseases caused by this organisms. The main objective of this study was to investigate the frequency of class 2 integrons in *Salmonella enterica* strains isolated from Tehran during 2007-2008.

Material and methods: *Salmonella* spp. strains have been isolated from several hospitals in Tehran during 2007-2008. The strains were identified by standard biochemical tests and serology. The susceptibility of the isolates was determined according to CLSI guidelines. Class 2 integrons were detected by PCR.

Results: In this research, 138 *Salmonella* spp. strains were isolated. Nine (6.5%) of the 138 isolates had a 2.16-kb class 2 integrons.

Conclusion: This is the first study of the prevalence of integron class 2 in *Salmonella* isolates in Tehran. Our findings showed that integrons class 2 was less widely spread among *Salmonella enterica* isolates. In the present study, the widespread occurrence of resistance to several groups of antibiotics in *Salmonella* isolates was demonstrated. It may be due to inappropriate and incorrect administration of antimicrobial agents in empiric therapies.

Keywords: Integron class 2, *Salmonella enterica*, antimicrobial resistance