

Antibiotic Resistance Patterns of *Serratia* Strains Isolated from Blood Cultures of the Patients Referred to Namazi Hospital in 2010, Shiraz, Iran

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Background & Objectives: In the recent years the problems associated with hospital infections caused by *Serratia* strains have become increasingly evident. The ability of this opportunistic pathogen to acquire resistance to a broad range of antibiotics has made effective therapy more difficult. Several recent investigations have dealt with the problem of antibiotic resistance in *Serratia*. This study was undertaken to evaluate the antibiogram patterns of the clinical *Serratia* strains isolated from the blood samples of the patients.

Methods: The blood sample of the patients, taken in bactec bottles were cultured and investigated for any causative infectious agents. Identification and final confirmation of the isolated organisms were done using biochemical- microbial tests and laboratory diagnostic Microgene kit. Antimicrobial resistance of the strains to 12 antibiotics was evaluated using the standard Methods of the Kirby- Bauer agar disk diffusion test.

Results: Totally, 22 *Serratia* strains were isolated from the blood specimens of the patients during March 2010 to March 2011. The data showed that; 57.8%, 55%, 43.7%, 36.8%, 33.3%, 31.8%, 25%, 22.7% and 15.78% of the *Serratia* strains were resistant to ceftriaxone, tobramycin, cefotaxime, cefepime, amikacin, gentamicin, ceftizoxime, ciprofloxacin and ceftazidime, respectively. No resistance to meropenem, imipenem and piperacillin/tazobactam was seen among all the isolates under the study.

Conclusion: Comparing the present data with the previously data achieved in other studies, show an obvious increase in antibiotic resistancy in clinical isolates of *Serratia*. However, the effects of carbapenems and piperacillin/tazobactam in vitro on these bacteria are considerable. These results mandate the local monitoring of resistance and its consideration in empirical therapy of *Serratia* infections.

Keywords: *Serratia*; Blood Cultures; Antibiotic Resistance