Title: Afficacy of quinolone and carbapenem against uropathogenic pseudomonas aeruginosa and their relation with class 1 integron

Authors: Presenting author:
First name & Surname: Miss Taghizadeh, Baharak*
Postgraduate Fellow of Microbiology, Islamic Azad University of Zanjan
Email Address: baharak57tg@yahoo.com

Additional Author 2:
First name & Surname: Dr Hasani, Akbar
Assistant Professor, Department of Medical Biochemistry and Biotechnology, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz
Email Address: dr.hasania@gmail.com

Additional Author 3:
First name & Surname: Dr Hasani, Alka
Assistant Professor, Research Center of Infectious Diseases and Tropical Medicine and Department of Microbiology, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz
Email Address: dr.alkahasani@tbzmed.ac.ir

Additional Author 4:
First name & Surname: Dr Varshochi, Mojtaba
Associate Professor Department of Infection Disease, Faculty of Medicine, Tabriz University Of Medical Sciences, Tabriz

Additional Author 5:
First name & Surname: Miss Dehgani, Leila
Laboratory Technician, Sina Hospital, Tabriz University

Abstract: Background: pseudomonas aeruginosa is an opportunistic bacterium, has recently emerged as one of the most important nosocomial pathogen in Iran and other countries. The organism has potentiality to cause various types of invasive and non invasive infections. These bacteria are of serious concern, particularly in the hospital set up due to its ability to develop resistance to several classes of antimicrobial drugs. Thus, increasing concern is ever increasing multi drug resistant pseudomonas aeruginosa.

Objective: To survey resistance in pseudomonas aeruginosa collected from high risk group patients with urinary tract infection admitted in high risk wards in Sina hospital.

Materials and Methods: Fifty non pseudomonas aeruginosa duplicated clinical isolates collected over a period of 10 months from patients urinary tract infection for this research, were studied for their resistance pattern towards 14 antibiotics. The bacterial isolates were identified by using the standard phenotypic method and genotypic methods. Antibiotic susceptibility was performed by Disk diffusion method according to CLSI recommendations. PCR was performed for the detection of class 1, 2 and 3 integrons.

Results: All isolates were found resistant to 3 antibiotic that nalidixic acid, ampicillin/sulbactam and rifampicin. Around 14% of this isolated showed resistance pattern towards imipenem, meropenem and ciprofloxacin. Class 1 integron was found in all isolates revealing multi drug resistance.

Conclusion: In consideration of presence of multidrug resistant pseudomonas aeruginosa, limited choice left is to study this organism for synergistic action of some of antibiotics alongwith appropriate infection control programme.