

Identification and Antimicrobial Susceptibility of *Pseudomonas* Spp. Isolated From Hospital Environment in Tonekabon, North of Iran

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Background & Objectives: Nosocomial infection is one of the most important medical problems in the whole world. A wide variety of opportunistic pathogens has been detected in hospital surfaces. Medical center surfaces can be a reservoir for pathogenic bacteria. Among this pathogens, Various species of *Pseudomonas*, especially *Pseudomonas aeruginosa* are one of the most important factors of nosocomial infection. The major purpose of this study was isolation and identification of *pseudomonas* spp from different section in Shahid Rajaii Hospital, Tonekabon and determine their antibiotic resistance pattern.

Methods: In this research 460 samples from hospital sections surfaces were collected in the city of Tonekabon, between December 2010 and June 2011. The identification of strains was performed by using biochemical tests and API20NE (Biomerieux). The Rates of antibiotic resistance of isolated strains were evaluated by disk diffusion methods.

Results: In general, 61 strains of *Pseudomonas* were isolated by using sterile swabs from all the sources. The highest isolation rate of *Pseudomonas* spp. was recorded in Surgery (19/71%) and ICU section (19/23%), while lowest isolation was recorded in Dialysis section (1/56%). Most of the *Pseudomonas* has been isolated from moist sites (sink 27/87%, water tap 14/75%) in hospital. out of 61 isolates 52 (85/25%) were belonged to *Pseudomonas aeruginosa*, 6 (9/83%) to *Pseudomonas stutzeri*, 2 (3/28%) to *Pseudomonas putida* and 1(1/64%) to *Pseudomonas fluorescens*. *Pseudomonas* showed the most susceptible to Ticarcillin, Gentamicin and Ciprofloxacin.

Conclusion: Hospital environments are repositories for different species of *Pseudomonas*. Therefore, the patients and people working in this area should pay more attention to the personal hygiene in order to avoid *pseudomonas* infection.

Keywords: Nosocomial Infections; *Pseudomonas*; Antibiotic Susceptibility