

Prevalence and antibiotic susceptibility of *Pseudomonas aeruginosa* isolated from Taleghani hospital, Gorgan-Iran

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Abstract

Background & Objective: in recent years antibiotic resistance of *Pseudomonas aeruginosa* is increased as a causative factor in hospital contamination. This study was done to determine the prevalence and antibiotics susceptibility of *Pseudomonas aeruginosa* isolated from inanimate objects in Taleghani hospital.

Materials & Methods: This descriptive study was done on inanimate objects in different wards of Taleghani hospital during 2006. Sampling was performed by sterile gauze pad for dry surfaces and swab for wet surfaces. To differentiate and identify *P.aeruginosa*, various culture media such as Brain Heart Infusion Agar, Citrimide Agar and Triple Sugar Iron Agar were used. Antibiotic sensitivity of the isolated strains was determined by Kirby-Bauer Method using Muller-hinton Agar medium. Moreover, antiseptic sensitivity of the strains to Decosept and Povidone-Iodine as the main antiseptic agents was identified by determining Minimal Bactericidal Concentration and Minimal Inhibitory Concentration using Nutrient Agar and Nutrient Broth media.

Results: Fifty-five of the total 292 samples were positive for *P.aeruginosa*. Based on the ratio of the number of positive samples to the total samples, Thalassemia ward (38.5%) was the most infected ward and taps (61.1%) was the most infected sampling place. None of the samples from room atmosphere and intensive care equipments were positive for *P.aeruginosa*. 20% of the samples were resistant to ceftazidime and 32.7% were resistant to piperacillin, also 10.9% of samples were resistance to both ceftazidime and piperacillin.

Conclusion: This study showed that contamination with *P.aeruginosa* and antibiotic resistance of the isolated bacteria are the main problems in Taleghani hospital.

Key Words: *Pseudomonas aeruginosa*, Nosocomial infections, Antibiotic resistance