

Antimicrobial Susceptibility Patterns of *Stenotrophomonas maltophilia* Strains Isolated from Blood Samples of Imam Khomeini Hospital in Tehran, Iran

Samin Zamani¹; Mohammad Javad Nasiri¹; Behshad Noorazar Khoshgnab¹; Azin Zamani²; Moloud Aflaki¹; Alireza Abdollahi*³

1- Department of Microbiology, Tehran University of Medical Sciences, Tehran, Iran

2-Department of Lab Science, Islamic Azad University of Gorgan, Gorgan, Iran

3-Department of Pathology, Imam Khomeini Hospitals Complex, Tehran, Iran

moloudaflaki@yahoo.com

Background & Objectives: *Stenotrophomonas maltophilia* is a newly emerging pathogen of growing significance that has been more frequently isolated in nosocomial specimens. In spite of its relatively low virulence, *S. maltophilia* can cause a wide variety of infections including pneumonia and bacteremia, particularly in immunocompromised patients. *S. maltophilia* is inherently resistant to many antimicrobial drugs that cause a significant challenge in treatment of infections. Also antimicrobial susceptibility patterns for *S. maltophilia* have not been fully standardized. The susceptibility testing of *S. maltophilia* must be done to determine the appropriate treatment for patients. The aim of this study was to determine the antimicrobial susceptibility of *S. maltophilia* from blood samples of hospitalized patients of Imam Khomeini hospital in Tehran, Iran.

Methods: A total of 950 samples from blood specimens were analyzed during 2010-2011 at Imam Khomeini Hospital in Tehran, Iran for identification of bacteria. The activity of various antimicrobial agents was determined with disk diffusion methods according to the National Committee for Clinical Laboratory Standards (NCCLS) guideline.

Results: *S. maltophilia* was isolated from 345 (36%) of blood samples. The extent of resistant to Ceftriaxone and Ticarcillin-clavulanic acid by disk diffusion methods was 84% and 75% respectively. However, significantly high degree of sensitivity rates to Ciprofloxacin (98%), Trimethoprim-sulfamethoxazole (98%), Co-trimoxazole (96%), and Amikacin (76%) were documented.

Conclusion: The results of this study confirm that *S. maltophilia* is highly sensitive to Ciprofloxacin, Co-trimoxazole, Trimethoprim-sulfamethoxazole and Amikacin that can be recommended as the agent of choice for the treatment of infections. Also this data show the high degree of resistant to many antibiotics that emphasize the importance of surveillance of antimicrobial resistance.

Keywords: *Stenotrophomonas maltophilia*; Antimicrobial Resistance; Susceptibility