Isolation and Identification of *Stenotrophomonas Maltophilia* from the Hospitals of Tehran City

Hajihasani, A. (MSc)  
MSc of Microbiology, Department of Pathobiology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

Douraghi, M. (PhD)  
Assistant Professor of Microbiology, Department of Pathobiology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

Rahbar, M. (PhD)  
Professor of Microbiology, Department of Pathobiology, Milad Hospital, Tehran, Iran

Mohammadzadeh, M. (MSc)  
MSc of Microbiology, Department of Microbiology, Milad Hospital, Tehran, Iran

Zeraati, H. (PhD)  
Associate Professor of Biostatistic, Department of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

Ghoorchian, S. (BSc)  
BSc of Laboratory Sciences, Department of Pathobiology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

Alavi Moghadam, M. (PhD)  
Associate Professor of Emergency Medicine, Department of Infection Control, Imam Hossein General Hospital, Tehran, Iran

Sabzi, M. (BSc)  
BSc of Nursing, Department of Infection Control, Imam Hossein Hospital, Tehran, Iran

**Corresponding Author:** Douraghi, M.

**Email:** mdouraghi@tums.ac.ir

Received: 7 July 2013  
Revised: 17 Jul 2013  
Accepted: 20 Jul 2013

**Abstract**

**Background and Objective:** *Stenotrophomonas maltophilia* is an opportunistic nosocomial pathogen with high mortality in immunocompromised cases. The aim of this study was to isolate and identify *Stenotrophomonas maltophilia* in the hospitals’ environment and wards.

**Material and Methods:** In this cross-sectional study, a total of 1108 samples were collected from environment of two hospitals during 12 months. Identification of isolates was performed using biochemical, phenotypic (intrinsic resistance to carbapenems) and molecular methods (amplification of 23S rRNA gene).

**Results:** Of the studied samples, 186 (16.78%) nonfermentative gram negative bacilli (NFGNB) were identified. Amongst NFGNB, 18 (1.62%) isolates were identified as *S. maltophilia* by using biochemical tests. Of 18 biochemically identified isolates, 15 (83.3%) were confirmed via PCR. Sinks (40%) and men surgery ward (33.3%) were the most contaminated sites and wards of hospitals, respectively.

**Conclusion:** *S. maltophilia* is repeatedly isolated from sink which shows that the moist hospital environments need to be considered as a source for dissemination of bacteria.

**Keywords:** Nosocomial Infections, Nonfermentative Gram Negative, *Stenotrophomonas Maltophilia*, PCR