Prevalence of Gram Negative Bacilli Isolated from the Equipment and Surfaces of Hospitals in Gorgan

Ayatollahi, AA. (MD)
MD of Medical Laboratory, Medical Laboratory Research Center, School of Paramedicine, Golestan University of Medical Sciences, Gorgan, Iran

Amini, A. (MSc)
MSc of Microbiology, Medical Laboratory Research Center, School of Paramedicine, Golestan University of Medical Sciences, Gorgan, Iran

Rahimi, S. (MSc)
MSc of Microbiology, Laboratory of Tuberculosis, Health Center of Golestan Province, Golestan University of Medical Sciences, Gorgan, Iran

Kiaei, M. (BSc)
BSc of Medical Laboratory, School of Paramedicine, Golestan University of Medical Sciences, Gorgan, Iran

Koohsar, F. (MSc)
PhD Student of Parasitology, Paramedical School, Golestan University of Medical Sciences, Gorgan, Iran

Khandan Del, A. (MSc)
MSc of Microbiology, Panje Azar Hospital, Gorgan, Iran

Abstract

**Background and Objective:** Nosocomial infection is one of the main factors of mortality in hospitals. One of the most important measures to control infection in hospitals is sampling of equipment and culturing the samples. This study aimed to investigate the prevalence of gram-negative bacilli obtained from the equipment of the hospital wards.

**Material and Methods:** This Descriptive study was carried out on 488 specimens taken from medical and non-medical devices and equipment of various wards, via census sampling. The samples taken by sterile swabs in Tryptic Soy Broth (TSB) were inoculated in blood agar and Eosin-Methylene Blue agar, and by biochemical standard tests the isolated colonies were identified.

**Results:** Of 488 isolates, 157 (32.17%) were positive for the presence of gram-negative bacilli. The highest bacterial contamination was related to Enterobacter (37.58%). Of hospital wards, the highest infection related to the surgical wards (19.75%), and the highest contamination is related to laryngoscope blades (12.74%) and ECG sensor device and the monitoring interface (7%).

**Conclusion:** Microbial infection with gram-negative bacilli is an overwhelming condition in hospital equipment.

**Key Words:** Gram Negative Bacilli, Nosocomial Infection, hospital wards, hospital equipments, Gorgan

Corresponding Author: Amini, A.

Email: amini_ab@msn.com

Received: 29 Dec 2014
Revised: 2 Mar 2015
Accepted: 4 Mar 2015

This paper should be cited as: Ayatollahi AA, Amini A, Rahimi S, Kiaei M, Koohsar F, Khandan Del A. [Prevalence of Gram Negative Bacilli Isolated from the Environment and Surfaces of Hospital Wards in Gorgan]. mljgoums. 2015; 9(2):70-77 [Article in Persian]