

Healthcare Associated Infections: Are Medical Staff Always Guilty? What is the Role of Patients?

Habip Gedik*

Department of Infectious Diseases and Clinical Microbiology, Ministry of Health Bakırköy Sadi Konuk Training and Research Hospital, Istanbul, Turkey

*Corresponding author: Habip Gedik, Infectious Diseases and Clinical Microbiology Physician, Department of Infectious Diseases and Clinical Microbiology, Ministry of Health Bakırköy Sadi Konuk Training and Research Hospital, Istanbul, Turkey, Tel: 090-5053362770; E-mail: habipgedik@yahoo.com

Rec date: Apr 25, 2014; Acc date: Jun 18, 2014; Pub date: Jun 24, 2014

Copyright: © 2014 Gedik H. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Letter to the Editor

Healthcare associated infections (HAIs) which are diagnosed to 5 million cases in acute care hospitals are responsible for 25 million extra days of hospital stay and a burden of 13-24 billion euro, causing to the mortality rate by 1% (50.000 deaths per year) [1]. With those numbers, they are a big challenge worldwide. *Enterococcus faecium*, *S. aureus*, *Klebsiella pneumoniae*, *Enterobacter spp.*, Carbapenem-resistant *A. baumannii* and *P. aeruginosa* are main challenging pathogens. Microorganisms are a part of the universe and must sustain their lives during producing resistance mechanisms. The struggle between humans and microbes will continue as long as the continuation of life should not be forgotten. Many reports and articles have been revealed that resistant microorganisms have already invaded not only hospitals, but also the farms, long-term care facility and the community [2]. Many strategies and measures were presented to reduce the rates of resistant bacteria such as automatic stop orders for use of antibiotics, required pharmacy or infectious disease consultations for prescription of certain antibiotics, surveillance of pathogen-specific resistance rates, and the development of local antimicrobial control policies and guidelines [3]. Health care workers, including doctors, nurses and other staff can transmit the resistant microorganisms from infected patients to another patient during patient care. Use of broad-spectrum antibiotics is needed very often in patients with comorbid risk factors. However, comorbidity predisposes to recurrent infection with impairment of immunity and frequent antibiotic use as well as a selection of resistant microorganisms. Immunity is one of the most important factors in preventing resistance. The immune response pressurizes the mutant selection window, contributes to alleviate the negative effects of non-compliance, and influences the optimal dosing strategy [4]. Broader antibiotic use selects resistant microorganisms at individual and hospital, so this selection increases the rates of resistant

microorganisms in infections. Owing to the fact that patients are more often colonized at a hospital than community and comorbidity such as urinary system abnormality, COPD, DM predisposes to infections in relation to impairment of immunity, exposure to nosocomial strains, frequent antibiotic use and hospitalization requirement. Colonization of the gut is the most important step for spreading of resistant microorganisms to the community.

Consequently, resistance to antimicrobials and resistant microorganisms will always exist. HAIs are a result of the broad-spectrum antibiotics requirement in those patients, so that impaired patients are succumbing against invading resistant microorganisms that develop under broad-spectrum antibiotics use due to impaired immunity and defence mechanisms. HAIs may be reduced, but may never be vanished. Medical staff are not single reason and guilty of HAIs. But it does not mean medical staff does not implement infection control measures and narrow-spectrum antibiotic use. We, medical staff, are always eager to take care all patients as much as we can with infection control measures and should inform the patients and their relatives in terms of HAIs appropriately and accurately.

References

1. Annual epidemiological report on communicable diseases in Europe 2010 (2010) Stockholm, European Centre for Disease Prevention and Control. 1-185
2. Andersson DI (2003) Persistence of antibiotic resistant bacteria. *Curr Opin Microbiol* 6: 452-456.
3. Zoutman DE, Ford BD (2005) The relationship between hospital infection surveillance and control activities and antibiotic-resistant pathogen rates. *Am J Infect Control* 33: 1-5.
4. Handel A, Margolis E, Levin BR (2009) Exploring the role of the immune response in preventing antibiotic resistance. *J Theor Biol* 256: 655-662.