

Study of bacterial agents of hospital infection in one of the private hospitals of Rasht during a six-month period (February 1395 to July 1396)

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Introduction: Nosocomial infections are defined as infections occurring during hospitalised(48-72h after entrance). Nosocomial infections are one of the important problems of health. The aim of this study was to determine the absolute and relative frequency of infection risk factors in a private hospital in Rasht. **Material and Methods:** This cross-sectional (descriptive-analytical) study was conducted April to September 2016. This study performed on 121(6.35%) out of 1903 samples containing urine, blood, respiratory secretions and surgical wounds of hospitalized patients in Golsar Hospital . The results of was positive. Samples were taken patients in sterile conditions. Then, cultured in Blood Agar and EMB media. After isolation and identification of the infection agent, an antibiotic susceptibility test was performed using disk diffusion method. Then, they were examined according to the CLSI table. **Results:** According to this study, bacteria responsible for hospital infection are: *Escherichia coli* (61.98%), *Citrobacter spp.*(18.18%), *Klebsiella spp.*(7.43%), *Staphylococcus epidermidis*(3.33%), *Staphylococcus saprophyticus*(2/47%), *Acinetobacter spp.*(2.47%), *Pseudomonas spp.*(2.47%), *Proteus spp.*(0.82%), and *Staphylococcus aureus*(0.82%).The most infection was in the ICU section(23.97). The most isolated bacteria in the ICU section were *Escherichia coli*(50%) and *Citrobacter* (35%). The isolates were most sensitive to nitrofurantoin followed by amikacin and most resistant to ampicillin. **Conclusions:** *Escherichia coli* is the most common bacterial agent in a nosocomial infections, an increase in antibiotic resistance and treatment failure is also important in controlling hospital infection, ultimately leading to a reduction in mortality. The study found that ampicillin had the least effect on infectious bacteria; therefore, it is not recommended to use this antibiotic to treat infections.

Keywords : Antibiotic resistance, Bacterial factors, Nosocomial infection. A survey on bacterial agents of Nosocomial Infections in a private hospital of Rasht during the six months of the year (Bahman 1395-Tir 1396).

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