Evaluation of positive bacterial culture results in cancer patients with nosocomial infections and related risk factors in Imam Khomeini Hospital in Ardabil during 2018-20

Abstract

Background: Nosocomial infections are one of the leading causes of death in hospitalized patients. Infection is one of the most important causes of morbidity and mortality in people with malignancy. Given that the goal of treatment in people with cancer is to increase the life expectancy of these patients, but one of the side effects of these treatments that threaten the life of these people is a secondary infection with immunodeficiency

Aim: Determination of positive bacterial culture results in cancer patients with nosocomial infections and related risk factors in Imam Khomeini Hospital in Ardabil

Methods and meterials: All cancer patients who were admitted to Imam Khomeini Hospital in Ardabil and their culture was positive for nosocomial infection were included in the study. The required information for each patient including age, sex, type of culture, type of microorganism isolated in culture, antibiogram and results of drug resistance, length of hospital stay and patient mortality were collected through a study of patient records. To determine the risk factors for infection by the number of positive cultures collected separately, patients with a diagnosis of cancer without positive culture were randomly selected and the individuals in terms of age, sex, type of cancer, length of hospital stay with incidence Infections were examined

Results: 4789 patients were admitted to hospital wards. 71 positive cultures were found, of which 62% were women and the rest were men. The most positive culture was urine culture. The most isolated bacterium was Escherichia coli. There is a significant relationship between patients' gender (p=0.029), type of cancer (p=0.002) and incidence of infection. There is no statistically significant relationship between the incidence of infection and the age of patients. (p=0.185) There is a significant relationship between the incidence of infection and the increase in hospitalization days (p=0.031) and mortality (p=0.033)

Conclusion: Imam Khomeini Medical Center in Ardabil probably has a unique pattern of nosocomial infections. Adherence to health protocols, both at the level of staff-patient communication and at the level of communication between patients, can greatly prevent the occurrence of nosocomial infections. Female gender was identified as one of the risk factors for nosocomial infections and nosocomial infections are an issue that affects mortality and length of hospitalization

Keywords: Cancer, nosocomial infection, bacterial culture