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Survey of Infectious and Non-Infectious Diseases and the Survival of Pilgrims at Health Centers of Ilam on the Day of Arbaeen in 2016

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Ilam province is adjacent to Iraq borders through which every year a large number of Muslims make their journey for the pilgrimage of Karbala (called Arbaeen). Ilam province sharing its borders with Iraq with 420 kilometers of common border is considered as the most active geographic point of Iran for going on a pilgrimage; hence, every year, about 1.5 to 2 million Iranian pilgrims start their pilgrimage from the border of Ilam with Iraq. Every year, pilgrims after making the pilgrimage or during crossing the borders experience contagious and infectious diseases due to their underlying diseases (e.g., blood pressure and diabetes) or the population density and prevalence. These diseases may be intensified during the journey and cause mortality, if scanty and instant attention is devoted to the treatment (1-3).

The present inquiry was a cross-sectional study implemented in the medical-teaching hospitals of Ilam city with an interval of one month (i.e., two weeks before and two weeks after Arbaeen). The study was conducted from November 5, 2016 to December 5, 2016 (Arbaeen was held at November 20, 2016). The study was ethically approved with the code of 900722/2 at Ilam University of Medical sciences, Ilam, Iran. The source of information was manipulated by a list of patients suffering from infectious and non-infection diseases. They were referred to the hospitals of Ilam and admitted to the hospitals two weeks before and after Arbaeen as pilgrims. These educational and training hospitals were governmental. Being the biggest hospitals located in Ilam city (Iran), these hospitals were referral centers. Ilam is populated by Kurds and its primary language is Kurdish. The number of Kurdish people who live in the city is about 175,000. Other characteristics are as follows: having cold and mountainous climate, having moderate economic wealth, being located in the west of Iran, having the highest age group of 20-25 years, and having an approximately equal number of men and women.

The inclusion criteria being met were as follows: patients would

- Be admitted to the hospitals two weeks before and after Arbaeen as pilgrims,

- Suffer from infectious and non-infectious diseases, and

- Be hospitalized in medical-teaching hospitals

Furthermore, the patients having non-infectious diseases (e.g., diabetes, hypertension, trauma, etc.) were excluded from the study population. Moreover, outpatients and non-hospitalized patients were excluded from the study. Finally, the sample size was selected from 200 patients based on the census.

Considering that in this study, infectious and non-infectious diseases were investigated among those referring to the healthcare centers, it is possible that a number of infected pilgrims did not refer to such centers and therefore, we could not examine those cases. In other words, the number of people with infectious and non-infectious diseases might be higher than the statistics; however, some of the patients had not undergone specialized tests and thus, it made us unaware of the performed procedures. Hence, such information was not included in the study. Finally, we could not find out the overall survival rate of the patients after the pilgrimage due to failure in dealing with and finding all the patients.

The research instrument was a checklist designed by the researcher that included two parts. The first part included the patients' demographic information (e.g., age, gender, underlying disease type, educational level, occupation status, place of residence, marital status, and ward type) and the second part contained information about infectious diseases (e.g., laboratory information, pathogens, and diagnosis of diseases). Laboratory information included clinical tests such as the values of Erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP), the result of blood culture, consumed antibiotics, and the values of white blood cell (WBC), urea, creatinine (Cr), fasting blood sugar (FBS), troponin, creatine phosphokinase (CPK), aspartate aminotransferase (AST), alanine aminotransferase (ALT), and platelets (PLT). After collecting and recording the data, the researcher put them in special formats for data analysis using SPSS V.19 software. The admitted men and women comprised 55% and 45% of the sample, respectively, while most of them were old patients (33.3%) and least of them were pediatric. The mortalities were due to acute gastroenteritis with severe dehydration (15.5%) and most of the infectious diseases were related to influenza diagnosis (22.7%). In non-infectious diseases, the most important reasons of hospitalization were diabetes type II (28.8%) and the most important reasons for mortality were attributed to myocardial infarction (16.8%). Most of those who died were in the elderly group (23.7%).

Acute gastroenteritis with severe dehydration is a highly contagious and lethal disease. If a person is infected with it, it can easily be transmitted and cause mortality in a large number of people (4-6). Identifying age groups more prone to diseases (e.g., the elderly people), complying with hygiene standards, consuming healthy food, and using safe drinking water can contribute to preventing the occurrence of a large number of infectious diseases. Moreover, it is recommended to hold training classes for pilgrims to learn about and get to know the symptoms of contagious diseases so that in the event of infection they promptly refer to healthcare centers to be treated and to prevent the transmission of infections. The rate of non-infectious diseases, myocardial infarction, and diabetes might be reduced by paying attention to symptoms to control them and by holding educational classes about the disease using educational pamphlets and prevention trainings. On the threshold, screening tests should be used for the pilgrims suspected of having the disease or having high age to prevent the distribution and transmission of infection. Then, by identifying those at risk, all necessary precautions should be taken.

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