

Diseases Led to Refer Iranian Pilgrims From Hajj in 2012

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Background: Some Iranian pilgrims are referred to Iran because of catching a new disease or exacerbation of their disease during the Hajj ceremony. These diseases need prolonged and specialized treatments. Investigation of the reasons led to their return to Iran is useful and effective in policy-making and planning of preventive health services.

Objectives: This study aimed to investigate the causes of referring Iranian patients to Iran during Hajj in 2010.

Patients and Methods: In this cross-sectional study, all Iranian pilgrim cases in Hajj (2012) who referred to Iran were studied, and data analysis was performed. Demographic data and the causes of return to Iran during and after Hajj rituals were analyzed.

Results: A total of 106 cases were referred Iran during Hajj 2012. Psychiatric problems, with 26.4% allocated the highest rate of return to Iran during Hajj days, and significant difference was observed in the reasons before and after performing Hajj rituals ($P=0.001$).

Conclusions: Psychiatric, neurological, gastrointestinal, and respiratory diseases are the most frequent reasons of referring patients to Iran. More accuracy in screening and care of patients are recommended before Hajj in order to prevent references to Iran and its complications.

Keywords: Ability; Psychiatry; Neurology; Policy Making; Health

1. Background

Hajj is an annual event in which nearly 3 million Muslims from all over the world are gathered in Mecca, Saudi Arabia to perform rituals. From Iran, nearly 100000 pilgrims participate in this great event, each year. According to Iran's Hajj and Pilgrimage Organization reports, the waiting period to participate in Hajj is about 18 years (1) and physical ability is one of the basic requirements to participate in this spiritual ceremony. This important event is held in about two months of the year in one of the hottest geographic places that is not permanent habitat of pilgrims. Pilgrims are forced together in a limited space and significant changes in their lifestyle and daily activities are found, during this trip. These factors can create several health problems for some pilgrims during Hajj (2). Health problems during Hajj can be divided into two major groups. The first group is acquired health problems during Hajj such as infectious diseases, trauma, heat stroke, gastrointestinal, and respiratory problems that some pilgrims experience them during the Hajj season, due its special conditions. The second group comprise worsening of underlying diseases such as cardiovascular, psychiatric, nephrological, and respiratory diseases that occur during Hajj due to changing life styles and conditions (2). During the Hajj days, some of the pilgrims due to exacerbation of their underlying disease or occurrence of a new disease lose their physical or mental ability to perform the heavy Hajj rituals and requires

long-term treatment and special procedures. Some of these patients before and some of them after Tashriq days (according to the rules of the Saudi Ministry of Hajj) are returned to Iran. This return (especially before performing Hajj rituals) has many spiritual, social, and economic effects on pilgrim, his family, health care systems, and organizations that provide other services in Hajj (3).

2. Objectives

No documented study on the causes of pilgrims referring to Iran has been done yet and this study was the first to identify its causes. Finally, the measures to prevent such a situation are presented.

3. Patients and Methods

In this retrospective cross-sectional study, medical records of all 106 patients who returned to Iran from Jeddah and Medina (Saudi Arabia) airports during Hajj 2010 were extracted from the archives of Hajj and Pilgrimage Medical Center. All Iranian pilgrims who could not be treated in Saudi Arabia by physicians were selected and enrolled in this study by census sampling method and then were analyzed. Non-Iranian patients were excluded. All records were studied in Hajj and Pilgrimage Health Research Center by a physician to ensure completeness of information, including demographic data, and diagnostic procedures. The study was ethically approved by

the Health Research Ethics Committee of the Hajj and Pilgrimage Center. Confidentiality of names of all subjects was observed. All data after completing checklists were entered into SPSS software (version 15, SPSS, Inc, Chicago, IL) and was used for the analysis of data. Variables were described using frequencies and percentages or means and standard deviations. T test was used to compare gender and time of dispatch. P value of less than 0.05 was considered as significance.

4. Results

A total of 106 cases were sent back to Iran from Jeddah and Medina airports during Hajj in 2010. About 20.8% of cases were performed before Tashriq days and rituals, and 79.2% of them after it. About 12.3% were sent from Medina and 87.7% from Jeddah. A total of 66% of them were men and 34% were women. Their mean age was 69.00 ± 12.38 year. The minimum age for deployment

was 36 and the maximum age was 93 years. Figure 1 shows the frequency of the causes of referring back to Iran during the Hajj in 2010. Mental disorder with the prevalence of 26.4% was the most common cause. Table 1 compares the frequency of causes before and after Tashriq days. Significant difference was seen between the causes of dispatch before and after Tashriq days (P = 0.001). Table 1 shows the frequency of causes based on gender. There was no statistically significant difference between males and females (P = 0.123).

5. Discussion

This study showed that psychiatric problems were the most frequent cause of sending pilgrims back to Iran during the Hajj season and deployment causes are different in two periods: before and after performing rituals (Tashriq days), although in this study, gender did not affect the deployment causes. This study is the first one

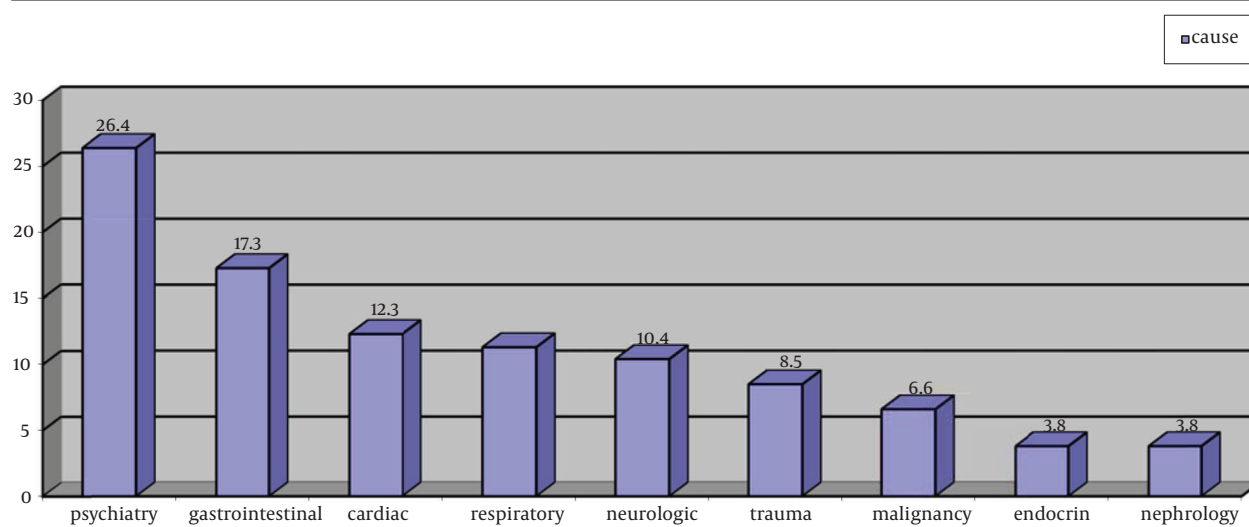


Figure 1. Causes of Iranian Patients Sent Back to Iran During Hajj 2012

Table 1. Comparison of Causes Based on Gender and Time of Dispatch^a

Cause	Respiratory	Cardiac	Psychiatry	Neurology	Gastrointestinal	Trauma	Malignancy	Endocrine	Nephrology	Total	P Value
Gender											0.123
Female	2 (5.5)	7 (19.4)	12 (33.3)	3 (8.3)	4 (11.1)	4 (11.1)	4 (11.1)	0 (0)	0 (0)	36 (100)	
Male	10 (14.2)	6 (8.5)	16 (22.8)	8 (11.4)	14 (20)	5 (7.1)	3 (4.28)	4 (5.71)	4 (22.8)	70 (100)	
Period											0.001
Before Tashriq days	1 (4.5)	1 (4.5)	13 (59)	3 (13.63)	1 (4.5)	1 (4.5)	2 (9.09)	0 (0)	0 (0)	22 (22)	
After Tashriq days	11 (13.09)	12 (14.28)	15 (17.85)	8 (9.5)	17 (20.23)	8 (9.5)	5 (5.9)	4 (4.7)	4 (4.7)	84 (100)	

^a Data are presented as No. (%).

that investigated the causes of sending patients back to Iran during Hajj. However, a different study by Al-Ghamdi et al. (4) investigated the causes of hospitalization in Saudi Arabia during Hajj in 2003 showed that respiratory and cardiac diseases and trauma were the most causes of patients' admission to the hospital during the Hajj in Mecca, however, this study did not consider the time of hospitalization. In the present study, patients referred to Iran have been studied that according to the Iranian reference system during Hajj, their treatment is impossible in the Saudi Arabia or their presence in that country is not expedient. Therefore, these patients should return to Iran earlier for special treatments. In the present study, the dispatch time was also considered, and this is important because performing all holy rites of Hajj needs a healthy physical ability (due to the overcrowding) and must be done within a certain period. It is obvious that such a meeting with people from around the world with inevitable overcrowding and limited in specified space and time can create several health problems for individuals and society (5).

As this study showed, psychiatric problems have been the most common causes for returning pilgrims to Iran during the days of Hajj. It seems that senility, new life conditions, climate changes, inadequate rest, stress, and irregular use of medications are the most important risk factors for exacerbation or recurrence of psychiatric diseases during Hajj (6), but the reasons for the occurrence or recurrence of these diseases during Hajj should be studied in the future researches. Most studies in the field of health in Hajj have paid more attention to respiratory infectious diseases (7). However, in the present study, respiratory diseases are the second cause of referring pilgrims to Iran. The important point in this respect is that most of these patients were referred to Iran after Tashriq days.

Because Hajj is the world largest annual gathering, a large number of pilgrims from different countries and continents are in close contact with each other. This kind of close contact increases the possibility of developing different types and new variety of infectious respiratory diseases. Because the sacred rites of Hajj must be done in a 4-day period, overcrowding happens in this period. Pilgrims are settled the deserts of Mina and Arafat (Saudi Arabia) and usually 50 to 100 of them stay overnight in a tent. Several millions of pilgrims get into Jamarat (Saudi Arabia) daily. Such overcrowding and close contact extremely raise the risk of respiratory infections (8). In this study, cardiac disease was the third cause of referring pilgrims back to Iran after Tashriq days. All Hajj rituals are performed in hot climates with relatively intense physical activity in overcrowded places, which is difficult even for healthy people. Certainly, these practices for patients with cardiovascular disorders due to physical conditions have a serious risk. Various studies, which investigated the relationship between physical activity and the rate of mortality in cardiovascular patients, have shown progressive reduction in mortality due to regular physical

activity. Studies show that regular long life activity reduces the mortality rate of cardiovascular diseases. However, intense and stressful physical activities in Hajj are not considered positive. These kinds of activities, especially in hot climates via the known pathophysiologic mechanisms (including increased heart rate, increased body temperature, decreased cardiac output caused by dehydration, and so on) even lead to death in cardiac patients.

On the other hand, poor ritual's performance by these patients compared to healthy individuals emphasizes the importance of screening tests in high-risk patients before Hajj. Furthermore, heart patients are recommended to set using their medications regularly with their doctor during Hajj (8). Anyway what seem necessary are the more accurate psychological and neurological screening tests, especially in elderly pilgrims, before Hajj and proper care of patients before and during Hajj, in order to prevent the consequences of returning pilgrims from Hajj. We recommend more education for pilgrims with regard to self-care, training physicians in diagnosis of acute patients, and providing intensive care during the trip, performing studies to investigate the causes of recurrence and exacerbation of psychological, cardiac and respiratory problems during Hajj.

Authors' Contributions

Navvab Shamspour: study concept and design, and supervision, critical revision of the manuscript for important intellectual content; Saeid Heidari: acquisition of data; Aminreza Tabatabaei: analysis and interpretation of data, drafting of the manuscript, and statistical analysis; and Ali Torkan: administrative, technical, and material support.

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