Evaluating the level of knowledge of people referring to the comprehensive health services center about crimean congo hemorrhagic fever

Jamshid Ayatollahi 1, Faezehsadat Heidari 1, Razieh Farsi 2, Arefeh Dehghani Tafti 3, Mahdie Hamidfar 1, Seyed Hossein Shahcheraghi 1,*, Alireza Farsi 4, Seyed Mahdi Razavi Bahabadi 5

1Infectious Diseases Research Center, Shahid Sadoughi Hospital, Shahid Sadoughi University of Medical Sciences, Yazd, Iran; 2Shahid Sadoughi University of Medical Sciences, Yazd, Iran; 3Department of Biostatistics & Epidemiology, School of Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran; 4Dezful University of Medical Sciences; 5Kashan University of Medical Sciences and Health Services

*Corresponding author: Seyed Hossein Shahcheraghi. Infectious Diseases Research Center, Shahid Sadoughi Hospital, Shahid Sadoughi University of Medical Sciences, Yazd, Iran. Email: shahcheraghih@gmail.com
DOI: 10.22034/HBB.2021.20
Received: May 24, 2021; Accepted: July 3, 2021

ABSTRACT

Since crimean congo hemorrhagic fever can be prevented with simple methods, people awareness and prevention of this disease is important. In this study, the level of knowledge about this disease and the factors affecting the knowledge of people were investigated in Yazd. In this study, 220 people referred to the comprehensive health services center in Yazd were included in the study and a questionnaire of knowledge of people level was completed. Then the obtained information was entered into statistical software. Only 30% of people were aware of crimean congo hemorrhagic fever.

Keywords: Crimean congo hemorrhagic fever, knowledge of people, Yazd

INTRODUCTION

Crimean Congo Hemorrhagic Fever (CCHF) is widespread in almost 30 countries in the Africa and Middle East, is a theoretically deadly viral infection [1-4].

The CCHF virus is spread to people through tick bites or contact especially with infected animal or human fluids or blood. It is deactivated at 56 °C for approximately 30 minutes. It is delicate to glutaraldehyde (2 %) and hypochloride (1 %) [1,5,6,7]. Climate,
environmental conditions, and human behavior all have the potential to influence CCHF epidemiology and dissemination [8,9]. CCHF does not have a specific treatment. Ribavirin is used, as well as helpful therapy (electrolyte and fluid (body water) exchange, blood replacement, and vasopressor usage in shock) as typical treatment [10-12]. It is also essential to assess the awareness of at-risk work groups toward CCHF. Thus, current study aimed to investigate the level of knowledge of individuals referring to the comprehensive health services center of Yazd city, Iran about CCHF.

**MATERIALS AND METHODS**

This descriptive cross-sectional study was conducted based on a questionnaire among those who referred to the Comprehensive Health Services Center of Yazd from March 2020 to March 2021. To evaluate the validity and reliability of the questionnaire, a pilot study was conducted on a number of respondents. The validity of the questions was confirmed by two infectious diseases specialists and the reliability was approved by Krombach alpha as 0.78. Taking into account the standard deviation of the knowledge score of 0.3 and 95 % confidence level and 4 % accuracy, the sample size was determined by the following formula:

\[ n = \frac{z^2 \cdot \sigma^2}{d^2} \times s^2 \]

The sampling method was simple random. Limitations of the study included the lack of knowledge of many individuals about CCHF and the decrease in the number of cases referring to Health Center due to the prevalence of Corona virus.

The collected data were entered into the statistical software SPSS Version 18 (Statistical Package for the Social Sciences, SPSS, Chicago, IL, USA). Significance level was considered 0.05.

**RESULTS**

This cross-sectional descriptive study was performed among the patients referred to the Comprehensive Health Services Center of Yazd and 220 questionnaires were completed. In this study, 6.4 % of people were under 20 years old, 23.6 % of people aged 21 to 30 years, 28.2 % of people aged 31 to 40 years, 24.1 % of people aged 41 to 50 years and 17.7 % of people aged over 50 years.

68.6 % were female and 31.4 % were male. 75.9 % were urban and 24.1 % were rural.
12.3% of people were illiterate and 4.5% had a master's degree or higher. 4.5% had medical and paramedical occupations and the rest had other occupations. 70% of people had no knowledge of CCHF.

The mean age of patients was 38.6±12.9 and mostly included men (31.4%) and urban dwellers (75.9%) with undergraduate education (39.5%) and housewives (52.7%). The mean score of knowledge (66 people) who knew about CCHF was 8.21±3.54.

In this study, people aged 31 to 40 years had the highest knowledge score (9.52±2.91) compared to other people.

Women (8.46±3.57) had higher mean knowledge scores than men (7.6±3.51) but this difference was not statistically significant.

As the level of education increased, the average score of people's knowledge about CCHF also increased, which was a statistically significant difference (Table 1).

In this study, the most information source about CCHF was the media (radio, television, etc.) (69.7%) (Table 2).

<table>
<thead>
<tr>
<th>Education level</th>
<th>Mean± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower than diploma</td>
<td>6.18±2.63</td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>7.3±3.46</td>
<td></td>
</tr>
<tr>
<td>Associate Degree</td>
<td>9.2±5.4</td>
<td>0.021</td>
</tr>
<tr>
<td>Bachelor</td>
<td>9.16±2.9</td>
<td></td>
</tr>
<tr>
<td>Master and above</td>
<td>10.5±3.12</td>
<td></td>
</tr>
</tbody>
</table>
**DISCUSSION**

In current study, 70% of people had no knowledge of CCHF. The most cases were in the urban areas. The majority people were in the illiterate level. The highest knowledge score was related to people 31-40 years old. The mean score of knowledge who knew about CCHF was 8.21±3.54. Women had higher mean knowledge scores than men. The most information source about CCHF was from the media (Radio, television).

In a 2009 study of 1,034 patients in Turkish children's clinics, people were insufficiently aware of the disease, and literate people were better informed than illiterate people, with radio and television being the most important source of information [1]. This study was similar to current study especially about insufficiently aware and source of information. In both studies radio was the main source of information.

Another study conducted in 2014 on 109 people in the emergency department of a hospital in Turkey with a mean age of 6.5±29.6, of whom 54 were physicians, 39 were nurses and 16 were paramedics, all of whom were aware of the disease [13]. In the mentioned study, awareness rate was the
higher toward current research because of higher level of education among participants.

Another study was conducted in 2018 on 900 students at random in Pakistan. 43 % of them were well aware of CCHF [14]. In current study, awareness rate (30 %) was lower than Pakistan study. Its reason is probably the performance of mentioned study among students with the higher level of education in comparison with current study.

A 2009 study of 296 students found that there was no significant relationship between knowledge and age. The knowledge score of nursing students was considerably higher than midwifery students and the average knowledge score was 14.8±54.6 [15]. In current study, there was no also significant correlation between knowledge and age.

CONCLUSION

Only 30% of the patients were aware of the CCHF and there was a direct and significant relationship between education level and awareness. On the other hand, the most source of information for people was media, which could increase the level of awareness of people by improving their information.

ACKNOWLEDGMENT

The authors like to acknowledge the staff of Infectious Diseases Research Center of Shahid Sadoughi University of Medical Sciences, Yazd.

REFERENCES

[5]. Shayan S, Bokaeae M, Shahrivar MR, Chinikar S. Crimean congo


