Original Research Article

KNOWLEDGE AND ATTITUDE ABOUT CRIMEAN CONGO HEMORRHAGIC FEVER (CCHF) AMONGST LOCAL RESIDENTS OF KARACHI, PAKISTAN

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ABSTRACT

Background: Crimean Congo Hemorrhagic Fever (CCHF), a tick-borne disease has been in the news with reports of its outbreak in Pakistan. Pakistan is considered as an endemic country for CCHF during last two decades . Humans get this infection after a bite of an infected tick or from one infected human to another by contact with infectious blood or body fluids.

Aim: To assess the level of knowledge regarding Crimean Congo Hemorrhagic Fever (CCHF) among the local residence of Karachi, Pakistan.

Method: This questionnaire based cross-sectional survey was conducted among the local residence of Karachi, Pakistan. The questionnaire was composed of 20 questions. The questionnaire included demographic information with their designation and knowledge level regarding sources, transmission, symptoms, prevention and treatment of Crimean Congo Hemorrhagic Fever (CCHF).

Result: A total of 150 respondents interviewed in the survey. Sufficient knowledge about CCHF was not found in (23%) of the respondent participants. Literate individuals (71%) were relatively better knowledge about CCHF as compared to the illiterate people (29%). Television and internet (50%) were considered as the most important and useful source of information on the disease.

Conclusion: This study revealed that the knowledge level of Karachi citizens about CCHF was insufficient. The need to educate the public about CCHF and the ticks is at an alarming level. As this disease can cause fatalities if the general community are not be informed and trained adequately. TV/radio broadcasts may be sufficient for the general public, but specialized educational programs and workshops are recommended for health workers and veterinary staffs.

***Keywords*:** Crimean Congo Hemorrhagic Fever (CCHF), Ticks, Knowledge

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INTRODUCTION:

Crimean-Congo hemorrhagic fever (CCHF) is a vector-borne hemorrhagic disease which is caused by a primarily zoonotic virus infecting wide range of domestic as well as wild animals. The main vectors are Hyalomma spp. ticks. The transmission of this virus to humans mainly occurs through tick bites crushing of infected ticks; contact with body fluids, blood and tissue of patients with CCHF during the acute phase of disease and contact with blood or tissue of viremic livestock [1].In recent years, several CCHF outbreaks were reported in Pakistan, and the disease persists in neighboring countries especially in Afghanistan [2, 3]. The first CCHF case in Pakistan was reported in 1976 from a patient who underwent laprotomy at Rawalpindi General Hospital [4].

Transmission of CCHFV Person-to-person occurs through direct exposure to blood or other secretions and instances of nosocomial transmission are well-documented. The virus is maintained in nature predominantly in the Ixodidtick vectors, particularly ticks of the genus Hyalomma [5]. The CCHFV can persist in the tick throughout its life stages by transtadial transmission and can be passed onto the offspring by transovarial transmission .Among domestic animals sheep, cattle, and goat play an important role in the natural cycle of the virus [6]. In these animals CCHFV replicates to high titres in the spleen, lung, liver and reticulo endothelial system in other organs but it generally causes only subclinical disease. In contrast, human infections often result in severe hemorrhagic fever (HF) with high levels of viral replication occurring in all major organs, including the liver [7]. Thus, ribavirin could potentially have benefits in this condition to make definitive conclusions. The dosage recommended by the World health Organization (WHO) of ribavirin is 30 mg/kg as an initial loading dose, then 15 mg/kg every 6 h for 4 days, and then 7.5 mg/kg every 8 h for 6 days [8,9]. Our aim in this study was to determine the CCHF-related knowledge levels of the local residence of Karachi, related with different profession and age group.

METHODOLOGY

The study was planned as a cross-sectional, descriptive one. It was conducted in October 2013.About 150 peoples are interviewed about awareness of CCHF (Crimean-Congo hemorrhagic fever) virus .All the150 respondents are the citizen of Karachi, Pakistan. In this study, we applied the questionnaires with face-to-face interview method .In which Socio demographical characteristics of the participants, the experiences of them or their relatives had with ticks and CCHF disease, their knowledge level about transmission, symptoms and protection from disease and the information sources they use were questioned with a 20-item questionnaire. When respondent needed instruction, researchers helped to understand and fill in the questionnaire.

RESULTS AND DISCUSSION

The assessment of knowledge and awareness of the Crimean-Congo Hemorrhagic Fever virus among the local residence in Karachi were studied. The analysis was supported by a cross section informative questionnaire.

Table 1. Demographic Details of the Respondents About CCHF

CHARACTERISTICS		N=Frequency	Percentage %
Gender:	Male	70	46.67
	Female	80	53.34
Age group:	21-30	78	52
	31-40	56	37.34
	41-50	13	8.6
	<50	3	2
Education:	Illetrate	44	29.34
	Literate	106	70.66
Profession:	Doctor	13	8.67
	Pharmacist	60	40
Others		77	51.3

Table: 1 shows the demographic details of the participants. Both male and female give a good response. Most of the respondents were young and belongs to the age group of 21-30years (52%). The majority of the participants were literate (70%). According to the respondents' knowledge people heard about the Congo fever.

Table 2. Assessment of knowledge regarding Congo viral fever

Variable	n=frequency	Percentage %
What is congo fever.		
Viral disease	89	59.33
Bacterial disease	13	8.67
Don't know	48	32
Source of transmission of congo virus.		
Infected Animals	31	20.67
Ticks	35	23.33
Insects	3	2
Close Contact With Patiens	44	29.33
Don't Know	37	24.67
Animal Source for disease transmission.		
Cow,buffalo,bull	64	42.67
Goat,sheep,lambs	40	26.67
Birds	20	13.33
Dogs,cat,horses	3	2
Mosquito	23	15.33
Is there any vaccine against congo virus.		
Yes	27	18
No	77	51.34
Don't know	51	34
Sources of information?		
Mass media (TV,radio,others)	52	34.67
Literature(books,internet,print media,)	75	50
Teachers	23	15.33

The awareness of the respondents concerning the disease revealed that although most (78%) of them were familiar with Congo viral fever. In Table: 2 the response of the participants was analyzed about CCHF. About 60 % of the respondents had knowledge that it is a viral disease. The Sources of information of these respondents regarding CCHF were as follows 35%, TV broadcasts, 23% teachers and about half, 50% get knowledge from the internet and print media. Generally half of the respondents (52%) had knowledge that Congo viral infection is a contagious and dangerous disease, but a large number about (37%) did not have any knowledge about it. The awareness about the main source of virus transmission

showed that participants had information about the role of ticks (23.33%) in the disease transmission. Some respondents (29.33%) think that close contact with the patient must be an important source of disease transmission. While a great number of them (24.67%) do not have proper knowledge about its source. The respondents had knowledge about sign and symptom which shows that 73% people thought that fever is the only other symptoms showed that bleeding from all over the body (68%) is an important sign of change infection. The majority of the participants, 82% had awareness that fever, muscle pain, myalgia bleeding from the body and headache are the most seen signs and symptoms of Congo viral infection. When asked the knowledge about the people at high risk Only 26% of the interviewed personnel believed that the shepherd was at a high risk for CCHF and other tick-borne diseases29% respondents thought that The health workers had a high risk others were workers in slaughter houses and milkman. The knowledge about the prevention measure use were also analyzed, about (31%) agreed with the use of insecticides against ticks in animal foods, while 33% agreed with the use of other control/prevention method and 13% had not any proper knowledge about the preventive measures.

CONCLUSION

Our study revealed that the knowledge and attitude of the local residence of Karachi concerning CCHF (Crimean Congo Hemmorrhagic Fever) were be insufficient. The education levels of the respondents were inadequate in term of with their knowledge about the role of ticks in the disease transmission, awareness of CCHF and its routes of transmission as well as symptoms of the disease, use of appropriate clothing for prevention of contact with ticks during the cleaning of the animal folds, and agreement with spraying of their animal folds against ticks. This disease can cause fatalities if the general community, as well as those in high risk jobs, such as nurses, butchers, veterinarians even the people using freshly butchered meat, are not be informed and trained adequately. Different levels of training are suggested based on the risk level for each class of the community; TV/radio broadcasts may be sufficient for the general public but specialized educational programs and workshops are recommended for health and veterinary staffs.

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