



Are Saudi medical students aware of middle east respiratory syndrome coronavirus during an outbreak?



Ahmad Al-Mohrej^{a,*}, Sajida Agha^b

^a College of Medicine, King Saud Bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

^b Department of Medical Education, College of Medicine, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

Received 27 February 2016; received in revised form 11 June 2016; accepted 24 June 2016

KEYWORDS

Coronavirus;
MERS-CoV;
Medical students;
Saudi Arabia;
Awareness

Summary Recently, an outbreak of MERS-CoV occurred in King Abdulaziz Medical City (KAMC), Riyadh. This outbreak contributed to the students at the King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) becoming more involved in promoting health awareness in their communities.

This was a cross-sectional study that evaluated students in the clinical phase of medical school. The data were collected by an online questionnaire. The measurements were obtained using a researcher-administered and a self-reported questionnaire that had been previously validated. A *p*-value of less than 0.05 was considered statistically significant.

One hundred and thirty-six students participated and showed good awareness regarding the clinical aspects of MERS, such as etiology, diagnosis, management, and prevention. However, 76% of the students were not aware of the mortality rate. Conversely, this study uncovered a low level of awareness in the basic sciences. Interestingly, fifth year medical students were more familiar with the incubation period than final year students (*p*-value <0.05). Regarding gender differences, more female students were knowledgeable about the incubation period and the possible asymptomatic presentation of the disease than male students (*p*-value <0.05). However, male students were more aware of the diagnostic tests for MERS than their female counterparts.

Medical students were knowledgeable about the clinical aspects of MERS but were lacking background awareness in the basic sciences.

© 2016 King Saud Bin Abdulaziz University for Health Sciences. Published by Elsevier Limited. All rights reserved.

* Corresponding author.

E-mail address: a7md12345@hotmail.com (A. Al-Mohrej).

Introduction

Middle East Respiratory Syndrome (MERS) is a viral infection that has recently emerged in humans and causes a severe acute respiratory illness with a mortality rate of 30–40% in average risk patients [1]. MERS is caused by a virus named MERS-CoV, which belongs to a large family of viruses called coronaviruses [2]. It was initially termed human (or novel) corona virus but was later changed to MERS-CoV [3]. Corona viruses are single-strand, positive-sense RNA viruses that measure 120–160 nanometers in diameter and are pleomorphic in shape [4]. In September 2012, the first case of MERS (the so called index case) was reported in Saudi Arabia and presented as symptoms of pneumonia and acute kidney injury [5]. Soon after, another patient from Qatar who had visited Saudi Arabia began experiencing acute respiratory symptoms and renal failure. The symptoms and type of viruses reported in these two patients were the same [6,7]. The age of patients with MERS ranged from 9 months to 94 years, and the median age was 48 years [8]. Male patients constituted 64% of the total number of cases in non-health care worker patients [8]. Conversely, according to Balkhy et al., the median age of health care workers who got MERS during the outbreak from June to August 2015 was 37 years, and female workers constituted 77% of the total cases [9]. In addition, the mortality rate in the infected general population was higher and incomparable to the that of health care workers because they were younger, healthier, and with fewer comorbidities [9].

The typical presentation of MERS is a severe acute respiratory illness with a fever, cough, and shortness of breath that can progress to pneumonia and kidney failure [10]. The patients with underlying conditions before becoming infected were more likely to die from MERS than healthy patients [10]. Conversely, some patients presented with atypical symptoms, such as diarrhea, nausea, and flu-like symptoms, while some patients remained asymptomatic [10]. The treatment for MERS-CoV, as for other coronaviruses, is supportive care because there is currently no curative treatment available [10].

Camels were believed to be the host of MERS-CoV based upon a study conducted in Saudi Arabia, which isolated and identified the genome of the viruses from a sick man and one of his camels [11]. Bats were also believed to play a role in disease transmission according to another study conducted in Saudi Arabia, which isolated coronavirus sequences by PCR from bats by taking fecal and rectal swabs [12]. Although bats could serve as a

reservoir for MERS-CoV, it is unlikely that they would be responsible for direct transmission of the infection to humans because it is uncommon to have direct or close contact between bats and humans [13].

Recently, there was an outbreak of MERS in Riyadh that involved one of its' medical cities, King Abdulaziz Medical City, which had only thirty-one infections from June to August 14th, 2015 [14]. On August 18th, 2015, there was an announcement of ten new cases; nine of them acquired the virus from the hospital [14]. Globally, one of the first large outbreaks that took place outside the Arabian Peninsula was in South Korea, which occurred between May and July 2015, and was followed by another outbreak in Riyadh in Saudi Arabia [15]. Based upon the recent outbreaks and the role of medical students in bringing awareness of MERS to the community, we aimed to assess the awareness of medical students studying in their clinical years to identify any gaps in their knowledge and to recommend any interventions to improve their awareness for better health education.

The aim of this study was to assess the awareness and background knowledge of medical students in their clinical years in King Saud Bin Abdulaziz University for Health Sciences in Riyadh regarding MERS during the outbreak.

Materials and methods

The study was conducted in the College of Medicine, King Saud Bin Abdulaziz University for Health Sciences (KSAU-COM) in Riyadh, Saudi Arabia. The College was established by Royal Decree No. 3-B-53278, dated January 1, 2004. It is located in King Abdulaziz Medical City, Riyadh. The College provides programs for obtaining a MBBS degree and a Master's in Medical Education. We selected to study students enrolled in one of the above mentioned programs because of their exposure to the recent outbreak of MERS that occurred in the hospital they were studying in.

This was a cross-sectional study that used consecutive samples because all of the male and female medical students in their clinical years (approximately 293) who agreed to participate in the study and completed the survey were included.

The data were collected using a fourteen-item online questionnaire that evaluated the medical student's level of awareness regarding MERS. The questionnaire included three main domains that covered their knowledge about basic medical sciences, such as virology, and their knowledge of clinical management and infection prevention and control. Some of the questionnaire items were

Download English Version:

<https://daneshyari.com/en/article/5672773>

Download Persian Version:

<https://daneshyari.com/article/5672773>

[Daneshyari.com](https://daneshyari.com)