



A Cross-Sectional Study on Knowledge about Swine Flu among First-Year MBBS Students in Mamata Medical College, Khammam

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Abstract

Introduction: An outbreak of the H1N1 swine flu virus, in march 2009, spread rapidly through the world, leading to the declaration of an influenza pandemic by WHO on 11th June 2009.

Objective: To assess the knowledge about swine flu among first-year MBBS students.

Materials and Methods: A cross-sectional study was conducted among first-year MBBS students of Mamata Medical College, Khammam, Telangana, during April 2015. Data were collected by using pilot-tested, self-administered questionnaire and results were analyzed by using SPSS version 19.

Results: Majority 110 (96.5%) of the students are having correct knowledge regarding symptoms of swine flu. Around 58 (50.9%) students are having knowledge regarding spread/mode of transmission of swine flu. Majority 74 (64.9%) of the students are having knowledge regarding availability of medication for swine flu.

Conclusion: The awareness regarding H1N1 infection was adequate among the students who participated in this study and this can be attributed to the immediate training given to these students as well as to the mass media campaign which is important in epidemic situations to avoid its spread and complication.

Keywords: Pandemic H1N1, Swine flu, MBBS students, Knowledge, Khammam.

Introduction

Swine influenza (swine flu) is a respiratory disease of pigs caused by *type A influenza*. It usually infects pigs, but occasionally can cross species barriers to infect humans.¹ H1N1 virus spread rapidly in late March and early April 2009, throughout the world, leading to declaration of an influenza pandemic by WHO on 11th June, 2009.² On 26th September 2011, WHO adopted a new nomenclature as influenza A (H1N1) pdm 09.³ During 2013, it caused local outbreak in India and 5253 cases and 699 deaths were reported, with a case fatality rate of 13.3%.⁴ There has been a sudden surge in the number of swine flu cases and fatalities across the country in January, 2015. Telangana reported maximum number of cases (238), followed by Delhi (179), Gujarat (91), Rajasthan (67), and Maharashtra (42).⁵ In Telangana state, in the month of January, 2015 from

23rd to 27th, 19 swine flu cases, including few deaths were reported. Within the corresponding period in AP, 9 cases were reported.⁶ Meanwhile two cases were also reported from Khammam district.⁷ The authors wanted to assess the knowledge of first-year medical students in relation to this epidemic. This study was specially targeted at first-year MBBS students as they are the cream of the society as well as being professional students, this gives us an understanding about their knowledge regarding swine flu which is widely publicized through various communication channels.

Methods

This was a facility-based cross-sectional study among first-year MBBS students, who joined for the academic year 2014-15, at Mamata Medical College, Khammam,

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Questions asked	No. of students answered correctly (%)	No. of students answered wrong (%)	No. of students answered don't know (%)
Are swine flu symptoms different from normal flu?	69(60.5)	25(21.9)	20(17.5)
How does H1N1 spread?	58(50.9)	56(49.1)	00
Can I catch it by eating pork and its products?	72(63.2)	21(18.4)	21(18.4)
Symptoms of H1N1	110(96.5)	4(3.5)	00
Signs of severe illness	95(83.3)	19(16.7)	00
Preventive measures	102(89.5)	12(10.5)	00
Is there any medication for H1N1?	74(64.9)	22(19.3)	18(15.8)
Is there any vaccine for H1N1?	57(50)	34(29.8)	23(20.2)
If I want to travel by train or plane should I wear mask?	95(83.3)	11(9.6)	8(7)
Treatment for H1N1	84(73.7)	12(10.5)	18(15.8)

Table 1. Knowledge of Participants regarding H1N1 Influenza Information

Telangana state. And the study was carried out in the second week of April, 2015. First-year MBBS students who were willing to participate in the study were included, and those who were not willing and absent during the study were excluded.

After obtaining approval from the Institutional Ethical Committee, data were collected by using a pilot-tested, self-administered questionnaire from the students. Verbal consent was obtained from the students before the study.

The questionnaire provided information regarding age in completed years, gender, place of residence, information regarding knowledge about swine flu including symptoms, spread, preventability of swine flu, availability of vaccine and treatment. Information regarding misconception like by eating pork and pork products a person can get swine flu and symptoms are different from normal flu, were also included.

Data were analyzed using SPSS version 19, and results are as follows.

Results

A total of 114 students participated in this study. The proportion of males was 36% (41) and females 64% (73). The students were aged between 17 and 20 years. Among them, 20.2% (23) students were from rural and 79.8% (91) from urban background. Majority 110 (96.5 %) of the students were having correct knowledge regarding symptoms of H1N1, such as fever, cough, running nose and cold. Around 58 (50.9 %) students were having correct knowledge about spread/mode of transmission of H1N1, that is, both direct and indirect transmission. Regarding the spread, girls were having more knowledge than the boys (statistically significant,

i.e., $p < 0.05$) (Table 2). And also students who came from urban background (79.8%) were statistically found to have better knowledge than those who came from rural background (20.2%), i.e., $p < 0.05$ (Table 3).

Among them, only 44 (38.6 %) students knew that the children and adults will have same symptoms, 29 (25.4%) students were having wrong knowledge regarding this question. Most 72 (63.2%) of them had a myth regarding spread of H1N1 by eating pork and pork products.

Only 21 (18.4%) students were aware that H1N1 is not transmitted by food. Regarding H1N1 complications like shortness of breath, pain in chest or abdomen, sudden dizziness, confusion and severe or persisting vomiting, most of the students, i.e., 95 (83.3%) were well aware about them, girls were having more knowledge than the boys and statistically found significant, i.e., $p < 0.05$ (Table 4). when students were asked, is there any medication for H1N1, around 74 (64.9%) said "yes" and 22 (19.3%) students said "no".

	Correct	Wrong	Total
Males	27	14	41
Females	29	44	73
Total	56	58	114

$\chi^2=7.171$. $p=0.007$. p value is less than 0.05, therefore it is significant.

Table 2. Distribution according to Spread of the Disease

	Rural	Urban	Total
Correct	7	49	56
Wrong	16	42	58
Total	23	91	114

$\chi^2=4.026$. $p=0.045$. p value is less than 0.05, therefore it is significant

Table 3. Distribution of H1N1 Spread according to Rural and Urban

	Correct	Wrong	Total
Males	9	30	39
Females	6	65	71
Total	15	95	110

$\chi^2=4.57$. $p=0.032$. p value is less than 0.05, therefore it is significant.

Table 4. Distribution according to Severe Illness of the Disease

Regarding precautionary measures to be taken to prevent H1N1, most of them 102 (89.5%) were well aware of preventive measures, i.e., avoiding close contacts with infected people, cleaning their hands with alcohol-based rub and reduce the amount of time that they spend on crowded settings. Use of mask was found to be the main preventive measure taken by most (83.3%) of them, if they wanted to travel by train or plane. Only 57 (50%) students knew the availability of vaccine, and 34 (29.8%) students were not aware that there is no vaccine available for H1N1. Regarding the definitive treatment for H1N1, i.e., anti-virals like Tamiflu, three fourth (73.7%) of them were having good knowledge.

Discussion

Understanding the perception to infectious disease threats would assist health agencies to pinpoint knowledge gaps which may be utilized in developing educational programs to increase the awareness of medical students. This study was performed during the epidemic peak season of H1N1. This sample was selected because first-year MBBS students are the cream of the society as well as being professional students, this gives us an understanding about their knowledge regarding swine flu which is widely publicized through various communication channels, and from another point of view they are well health-oriented cohort through whom one can detect the weak as well as the strong points of health education messages conducted both for general population and for the medical staff regarding this subject.

Several studies tried to identify the awareness, knowledge, attitudes and practices (KAP) of the general population or college students regarding swine flu,^{10,14} but fewer studies regarding KAP of H1N1 among medical students.^{15,17} This study showed that the medical students interviewed demonstrated good knowledge about swine flu (H1N1) infection, a finding inconsistent with that reported from medical student survey in Pakistan,¹⁶ and healthcare workers' surveys in Nigeria, which reported incomplete knowledge of the studied sample.¹⁰

Also, the majority knew that air-borne droplet is the mode of infection. This finding agreed with those found from Pakistan¹⁶ and turkey¹⁵ but not with Chinese telephone survey¹¹. Almost all the students (89.5%) reported that keeping good hygiene (washing hands with alcohol-based rub, avoiding close contact with infected people, avoiding touching nose and mouth and reducing the amount of time in crowded settings) is the best method to control transmission of infection, while 95.5% of participants from turkey¹⁵ knew hand washing, 87.9% from Nigeria¹⁰ reported hand washing and 65.6% from Pakistan¹⁶ rated covering the nose and mouth as the best method to control infection spread. Fever was identified correctly as the main symptom of infected person by all the students (96.5%), a symptom reported by 72.5% of Pakistani students,¹⁶ 83% of Nigerian¹⁰ health workers and 96.1% of Turkish students.¹⁵

Only half (43%) of the students knew that performing laboratory tests is the way to confirm the diagnosis of H1N1, and 41.2% were convinced that signs and symptoms alone could confirm the diagnosis. However, 50 and 73.7% of the students who answered the questions knew correctly that there is a vaccine available for H1N1 and H1N1 can be treated with anti-virals like Oseltamivir respectively. This disagreed with the Pakistani¹⁶ study as 51.3% of the participants reported that there is no treatment available and 37.9% participants said that infected persons with H1N1 could not be treated.

Conclusion

The awareness regarding H1N1 infection was adequate among the students who participated in this study and this can be attributed to the immediate training given to these students as well as to the mass media campaign which is important in epidemic situations to avoid its spread and complication.

Conflict of Interest: None

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