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Awareness About Swine Flu and Perception Regarding its Prevention Among Medical Students During Current Outbreak in Jhansi

KEYWORDS: swineflu, outbreak, and awareness.

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ABSTRACT *Background- Swine flu is an infection caused by a virus. Current swine flu outbreak refers to an outbreak of the 2009 pandemic H1N1 virus in India, which is still ongoing.*

Objectives-To study the awareness & assess the perception about preventive measure by medical students.

Material and method- A cross sectional study was carried out among the students of MLB Medical College, Jhansi during February-March 2015. Out of 100 students, 97 students (males=67, females=30) were selected. Data was analyzed statistically using percentages and chi square test. SPSS was used.

Results-93% of males & 77% of females were aware of swine flu. Among the preventive measures adopted; personal protective equipments like N-95 masks & handkerchief found to be most commonly used.

Conclusions-Awareness among medical students towards swine flu and the preventive measures adopted was enough but some wrong misconception were present.

Introduction

Current swine flu outbreak refers to an outbreak of the 2009 pandemic H1N1 virus [1] in India, which is still ongoing as of February 2015.By 11 March 2015, according to the data released by the Health Ministry, 27,886 cases had been reported and 1,587 people had died to the disease [2].

Swine flu is an infection caused by a virus. The virus is contagious and can spread from human to human through droplets created while coughing or sneezing by an infected person.Symptoms of swine flu in people are similar to the symptoms of regular human flu and include fever, cough, sore throat, body aches, headache, chills and fatigue[3]. Disease can be prevented by simple public health measures like isolation, quarantine Social distancing - school closure Hand hygiene, cough etiquette Respiratory protection (mask use) , vaccine and antiviral drugs.

Medical students are easily susceptible to swine flu infection during an outbreak and their knowledge can be helpful to them as well as to the community for prevention of swine flu, against this background this study was planned with the following objectives.

Objectives

1. To study the awareness about swine flu among medical students during current outbreak.
2. To assess the perception about preventive measure by medical students during swine flu outbreak.

Material and methods

A cross sectional study was carried out in the department of Community Medicine, M.L.B.Medical College, Jhansi city. All students of MBBS final professional part-1 (batch 2011) were enrolled for study during current outbreak of swine flu in the month of February-March 2015. Out of 100 students, only 97 students (males=67, females=30) were selected who were present in the department of community medicine during the month of February & March for the purpose of teaching activities. After taking consent from the selected students, data was collected on the predesigned and pre-tested questionnaire by the residents of the department. The questionnaire consists of awareness regarding swine flu, there causative agent, type of strain, awareness about spread, vaccines and medicines. It also consists of questions regarding adoption of preventive practices like use of N-95 masks, handkerchiefs etc.

Statistical analysis: data were collected and entered into a Microsoft Excel spreadsheet and then transferred to Statistical Package for Social Sciences (SPSS®) (trial version 16.0) and analyzed statistically using percentages and chi square test.

Results

Table no.1 shows awareness about swine flu outbreak among medical students. Out of 67 males and 30 females, 93% of males & 77% of females were aware of swine flu which is statistically significant in male students .Mostly students responded its viral origin although 48 % of males wrongly identified the causative agent as bacterial in nature and H1N1strain was most common which is also found to be significant. Media becomes the most common source of information followed by doctors, while winter season is the most common season of outbreak responded by students. Regarding symptoms and spreads of swine flu; fever, cough & running nose was most com-

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mon symptoms and spread by coughing, sneezing, shaking hands but some students responded as food, water and mosquito bite for its spread although not significant.

Table no.2 shows perception regarding prevention and treatment of swine flu. 85% of males & 67% of females have awareness about availability of vaccine and medicine which is statistically significant and live vaccine was significantly preferred over killed vaccine. Mostly student perceived about its curability which is statistically significant in male. Among the preventive measures adopted; personal protective equipments like N-95 masks & handkerchief found to be most commonly used followed by hand washing, isolation and away from overcrowded places but the result were not significant. 82% male and 77% female perceived that it can be halted at current stage and preparedness was good (70% male & 63%females).

Discussion

In our study, the awareness towards swine flu among medical students is high whereas in a focus group discussion conducted by Mitchell T et al [4] founded limited information regarding (H1N1) pdm09 and insufficient understanding of university decisions which is different from our results due to level of knowledge among medical students than university student while another study supported our study by Singh K et al [5] in Udaipur city among dental students, 92.6% had heard about swine flu, whereas only 64.3% of them knew about the H1N1 virus. Respondents rated hand washing and face masks as the most effective measures for the prevention of pandemic influenza. Similar study conducted by Kamate SK et al [6] in Udaipur city, 83.1% had heard about Influenza A (H1N1), but 47.4% felt that they did not have enough information about the pandemic. Knowledge differed significantly according to gender, age groups, and educational status as well as working status; however, females had better attitude than males but our study shows more awareness in male than female students. In a study by Rajoura OP [7] in Delhi, 75% of the health care providers were aware about the symptoms of swine flu. Mostly, all study subjects were aware that it is transmitted through droplet infection. Practice of wearing mask during duty hours was observed among 82.6% of doctors and 85% of nurses while Datta SS[8] reported among Para-medical workers (PMWs) in that majority of the PMWs knew about signs and symptoms (89.03%), mode of transmission (91.56%) and route of transmission (91.98%) of Swine flu. Television (67.51%) was the major source of information. 196 (82.7%) and 191 (80.59%) PMWs respectively knew about availability of vaccine and treatment against Swine flu. 94.09% PMWs stated that extra precautions such as use of face mask, frequent hand washing, use of gloves etc. should be taken while handling any suspected Swine flu case and 73.84% PMWs do take such precautions. 80.17% PMWs opined that epidemic of Swine flu can be halted at current stage. Another study supported us by Puri S et al [9] in north Indi, awareness about causal agent was 89.2%. All the participants were aware of the strain of virus and 96.3% knew about its transmission by droplet method. Preparedness was good (93.3%) in all aspects except for the diagnostics which is also supported our results.

Conclusions & Recommendations

In our study the, awareness among medical students towards swine flu was found enough and perception regarding preventive measures adopted was good and it was found more in males as compared to females but some students have wrong misconception about the causative agent, spread, season of outbreak as well about vaccine and medicine was found.

Medical teaching programmer should be focus on current issues and outbreaks, Clinical curriculum like ward posting should help them to identify and educate them how to use these preventive measures and more practical aspects should be discussed in tutorials and demonstration as well as IEC programs, Focal group discussions (FGD) and workshops should be conducted during outbreak so that their knowledge can be helpful to them as well as community.

Tables

Table no.1- Awareness regarding swine flu outbreak among medical students (N=97)

Characteristics	Male (N=67) (69%)	Female (N=30) (31%)	χ^2	P- value
Awareness about swine flu outbreak				
yes	62(92.5)	23(77)	4.8	**0.02**
no	5(7.5)	7(23)		
Causative agent of swine flu				
Viral	35(52.2)	23(77)	5.14	**0.02**
Bacterial	32(47.8)	7(23)		
Strain causing swine flu				
H1N1	39(58.2)	24(80)	8.59	**0.01**
H2N2	20(29.8)	01(3.3)		
H5N2	08(11.9)	05(16.7)		
Source of information*				
TV	64(95)	29(96.6)	0.398	0.94
Newspaper	56(83.5)	23(77)		
Internet	41(61.1)	17(57)		
Doctors	50(74.6)	25(83.3)		
Common symptoms*				
Fever	65(95.3)	28(95)	1.552	0.817
Cough	60(90)	27(90)		
Runny nose	53(79)	23(77)		
Diarrhea	40(60)	14(47)		
Joint & body pain	38(56.7)	11(37)		
Mode of spread*				
Coughing ,sneezing	62(92.5)	29(96.6)	0.682	0 .877
Shaking hands	50(74.6)	25(83.3)		
Food ,water	24(35.8)	13(46)		
Mosquito bite	20(29.8)	07(23)		
Season of outbreak*				
Summer	42(62)	17(57)	0.34	0.843
Winter	65(96)	28(95)		
Rainy season	62(92.5)	22(76)		

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*= multiple responses
χ^{2}= chi-square
P-value<0.05 is statistically significant

Table no.2- Perception regarding prevention and treatment of swine flu (N=97)

Characteristics	Male (N=67) (69%)	Female (N=30) (31%)	χ^{2}	P- value
Availability of vaccine or medicine				
Yes	57(85)	20(66.7)	4.29	**0.03**
No	10(15)	10(33.3)		
Type of Vaccine of swine flu*				
Live vaccine	45(67)	14(47)	6.3	**0.04**
Killed vaccine	57(85)	17((57)		
No vaccine	10(15)	10(33.3)		
Curability of swine flu				
Yes	64(95.5)	27(90)	5.26	**0.02**
No	03(4.5)	03(10)		
Preventive measures adopted*				
Use of personal protective equipments (N95 masks, handkerchiefs)	65(97)	30(100)	0.207	0.976
Hand washing	65(97)	28(93.3)		
No visit to crowded places	62(92.5)	25(83.3)		
Keeping away from patient	55(82)	25(83.3)		
Current outbreak can be halted				
Yes	55(82)	23((77)	0.387	0.535
No	12(18)	07(23)		
Preparedness about current outbreak			0.443	0.505
Yes	47(70)	19(63.3)		
No	20(30)	11(36.7)		

*= multiple responses
χ^{2}= chi square
P-value< 0.05 is statistically significant

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