A Clinical and Epidemiological Study of H1N1 Cases at Tertiary Care Hospital in Bhavnagar, Gujarat

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Abstract: Introduction: The swine (H1N1) virus that has caused pandemic worldwide in 2009 is now causing seasonal epidemic worldwide. Gujarat is battling alarming spikes of swine flu cases seasonally since then. Few studies have been conducted to evaluate the clinical and epidemiological profile of the patients admitted in tertiary care hospitals. There is need of this type of studies to know the actual picture of disease pattern. Method: A secondary data analysis was done in Microsoft excel. Patients detail was received for duration from 24-July 2017 to 25 October 2017 from record section of Sir-T hospital, Bhavnagar and that was used to evaluate further. Results: Majority of the patients were from age group 60-69 years of age, representing 19.2% of all admitted patients. Over all admission rate was higher in male population 55.89% as compared to female population (44.1%). 70% of the admitted patients were cured and discharged from institution. Out of 190 positive patients treated, 41 (21.57%) patients died died. Major clinical presentation of patients was fever (84%) and Cough (80.5%). Majority of patients present with combination of symptoms like cough, sore throat and fever. Conclusion: Swine flu affected 60-69 years of age in the male population presenting with fever as major symptom. [I Hadiyel, Natl J Integr Res Med, 2018; 9(2):36-38]

Key Words: Clinical study, Epidemiological study, Swine flu

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Introduction: The swine (H1N1) virus that has caused pandemic worldwide in 2009, is now causing seasonal epidemic worldwide. [1] India has witnessed the worst outbreak of the Swine flu in the year 2009. The disease affected close to 50,000 people and killed more than 2,700 across the country. [2] Since 2009, different states in India have faced epidemic of swine flu like seasonal trends. [3] Out of all the states, Gujarat has reported highest (517) deaths in year 2015, showing worst occurring epidemic in state. [4] Gujarat is battling an alarming spike in swine flu cases this year too. There are a little data available of the admissions and the admission pattern of swine flu patients as per literature. So this study has been conducted to evaluate the Clinical and Epidemiological profile and admission pattern of swine flu patients in a tertiary care hospital.

Methods: There is a swine flu OPD run by Sir T hospital, Bhavnagar. The patients presented with symptoms of swine flu were tested, counselled and treated with integrated approach through Medicine, ENT, Micro and PSM department. All the patients presented with symptoms like swine flu were categorized according to WHO classification in Categories A, B and C. The patients having signs and symptoms of category A and B were given oseltamivir and taken for follow up for the next day and further. The patients represented with severe signs and symptoms categorised under category-C were admitted and treated accordingly. The details of demographic profile and clinical presentation including the contact numbers of the patients' were well maintained in hospital record section.

The data of clinical and epidemiological profile of the patients' was received from the record section of the hospital. A secondary data analysis was done in Microsoft Excel. Patient's details were received from 24-July to 25 October 2017. The data included were demographic and clinical profile during admission with their end outcome.

Results: A total of 390 patients were admitted up to 24th October 2017 in Sir-T hospital, Bhavnagar. Based on case definition "suspected swine flu", the patient's profile is as given below

Table 1: Age wise distribution of admitted patients

Age-group (years)	Number	Percentage
1-9	2	0.5
10-19	32	8.2
20-29	47	12.1
30-39	54	13.8
40-49	70	17.9
50-59	65	16.7
60-69	75	19.2
70-79	34	8.7
80-89	10	2.6
>90	05	1.3
Total	390	100

Table-1 showing age wise distribution of patients admitted in the Sir T hospital Bhavnagar. Majority of the patients were from age group 60-69 years of age, representing 19.2% of all admitted patients.

Table 2: Sex wise distribution of admitted patients

Sex	Number	Percentage
Female	172	44.1
Male	218	55.89
Total	390	100

Over all admission rate was higher in male population 55.89% as compared to female population 44.1%

Table 3: Area wise distribution of admitted patients

Area	Number	Percentage
Urban	182	46.66
Rural	208	53.34
Total	390	100

Table 4: Test results of admitted patients

Test results	Number	Percentage
Positive	191	48.97
Negative	199	51.02
Total	390	100

Out of 390 admitted patients, 191 (48.97%) were positive for swine flu.

Table 5: Outcome of patients who were positive

Outcome	Number	Percentage
Cured and discharged	133	70
Transferred	2	1.05
Expired	41	21.57
LAMA	12	6.31
Absconded	4	1.57
Total	191	100

70% of the admitted patients were cured and discharged from institutions. Out of 190 positive patients treated, 41 (21.57%) patients died.

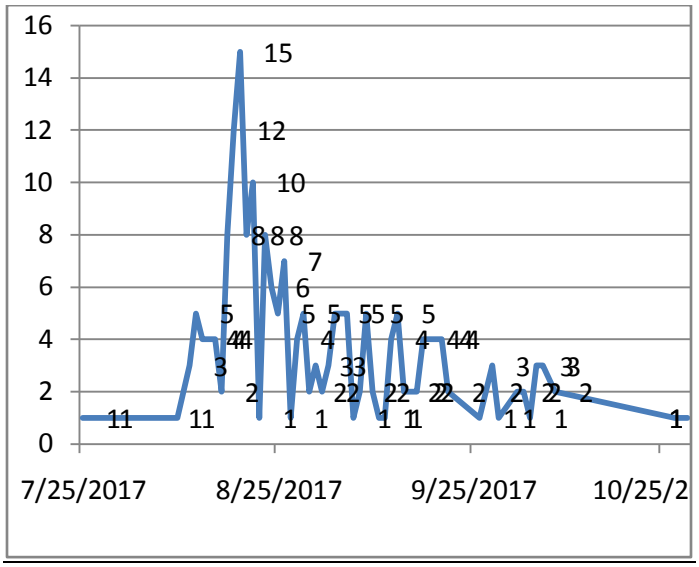
Table-6: Clinical Features of Admitted patients

Clinical Profile	Number	Percentage
Cough	153	80.5
Fever	160	84.2
Breathlessness	133	70.0
Sore throat	140	73.7
Nasal catarrh	120	63.2
Headache	118	62.1
Haemoptysis	12	6.3
Body ache	110	57.9

* One patient can present with multiple symptoms

Major clinical presentation of patients were fever (84%) and Cough (80.5%). Majority of patients present with combination of symptoms like cough, sore throat and fever.

Fig. 1: Date wise distribution of the patients admitted in the ward



Based on the above chart (Fig.1), we can see that majority of patients was admitted during month of August 2017 showing that the epidemic was on peak in this season.

Discussion: Clinical and epidemiological features of patients may vary in different time and places in case of H1N1. In the present study, attempt was made to show the various features of patients presenting with swine flu at tertiary care hospital. As per above results, we have seen that majority of the patients were from age group 60-69 years of age, representing 19.2% of all admitted patients while other studies demonstrated that majority of patients were from 18-50 years age showing broad age group in one category [5] and another study giving majority affected age group is 20-30 years of age [6]. In this study, males (55.89%) were affected more as compared to females (44.1%). Other studies also showed the same pattern. [5, 6, 7] This explains that males have more exposure to the infected which may be due to more contact. This study revealed that out of 191 (48.97%) positive cases, 133 were cured (70%). These data showing that early reporting and prompt treatment is very much essential in disease like swine flu. In this study, major clinical presentation of patients was fever (84%) and Cough (80.5%). Majority of patients present with combination of symptoms like

cough, sore throat and fever. Similar observations were represented by other studies. [5,6,7,8] Based on this study, we can see that, majority of patients was admitted during month of August 2017 showing that the epidemic was on peak in this season. Different studies have shown the peak mostly in March, April or May season [6,9].

Conclusion: Swine flu affected 60-69 years of age in the male population presenting with fever as major symptom representing from rural area.

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