



## ANALYZING THE CLINICAL PROFILE & OUTCOME OF H1N1 SWINE FLU IN AHMEDABAD

### General Medicine

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### ABSTRACT

#### Introduction

Swine flu is an infective disease caused by any one of the influenza viruses. The world saw its first pandemic of swine flu in 2009 when WHO raised a world wide pandemic alert to level 6 on June 11, 2009.

#### Methods

A retrospective study was carried out on the confirmed cases of H1N1 Swine flu admitted during 2017-2018 period. Cases were confirmed by Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) done on their respiratory samples.

#### Results

Out of the 50 patients admitted with Swine flu, fever was the most common symptom 45 (90%), 29 were females while 21 were males. 6 patients expired in the study.

#### Conclusion

Swine flu is a potentially treatable condition if treated early in its course. It causes ARDS if untreated and is potentially fatal

### KEYWORDS

#### INTRODUCTION:

Influenza is a virus belonging to orthomyxovirus family that was isolated back in the year 1953. Three pandemics of Influenza since the year 1918 has killed thousands of people. It predominantly affects the young population usually leading to establishment of Acute Respiratory Distress Syndrome (A.R.D.S). 1,3-6 A/California/7/2009 strain of pandemic H1N1 influenza which is prevalent these days, causes alveolar haemorrhage in the ferret model; that leads to serious clinical outcomes. 7,8 Pregnancy and associated metabolic conditions are known to increase the severity of the disease and influence outcome.

High incidence of severe illness and high rate of transmissibility is a huge burden on the resource poor healthcare infrastructure of India. Up to 30th March 2015, 33761 confirmed cases of Swine Flu were noted in India of which 6945 occurred in Gujarat, 428 amongst them died.<sup>9</sup>

This is a retrospective study conducted to describe our experience of managing serologically confirmed cases of swine flu between 1st January, 2017 and 15th September 2018. Also we assess the Epidemiology, Clinical Profile & Laboratory Assessment of the cases of H1N1 Swine Flu in the city of Ahmedabad.

#### OBJECTIVES:

1. To study the clinical profile and outcomes in patients with Haemagglutinin1 Neuraminidase1 (H1N1) swine flu at a tertiary care hospital in Ahmedabad, Gujarat, India.
2. To assess demographic profile & response to treatment in these patients.

#### INCLUSION CRITERIA:

1. Age >14 years

#### EXCLUSION CRITERIA:

1. Patients giving negative consent for study.

#### MATERIALS & METHODS:

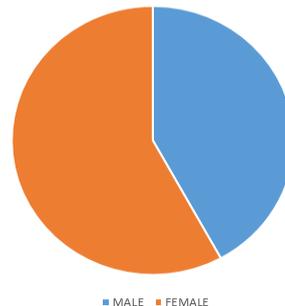
A retrospective study was carried out on the confirmed cases of H1N1 Swine flu admitted during 2017-2018 period. Cases were confirmed by Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) done on their respiratory samples.

#### RESULTS:

In our study total 50 confirmed cases of swine flu were taken. Out of these 21 (42%) were Males & 29 (58%) were Females. Out of 29

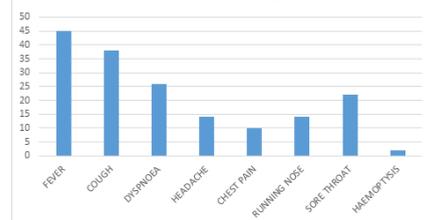
Females 3 were pregnant. The most common age group affected was 20-50 years – 30 (60%), followed by >50 years – 15 (30%) and least affected was <20 year – 5 (10%).

GENDER RATIO



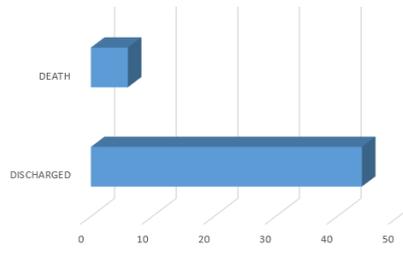
Urban population was predominant in our study with 46 (92%) individuals coming from Urban Residency & 4 (8%) from Rural residency.

SYMPTOM PROFILE



On clinical evaluation of symptomatology of these 50 individuals, symptoms with the maximum frequency of occurrence was FEVER-45 (90%) followed by COUGH – 38 (76%), DYSPNOEA – 26 (52%), SORE THROAT- 22 (44%), RHINITIS & HEADACHE – 14 (28%), CHEST PAIN – 10 (20%), HEMOPTYSIS – 2 (4%) in descending order of their frequency. These findings are similar to the study described by Jagannath Rao et al Puvalingam et al, and Dawood et al. 10-12 29 (58%) of these individuals were having no comorbidities whereas 21 (42%) of them were having comorbidities like Hypertension, Diabetes Mellitus, Ischaemic Heart Disease COPD,

Bronchial Asthma, Cancer & Anaemi On Chest examination 9 (18%) of individuals had clear chest whereas out those with some positive findings on chest, maximum frequency recorded was of bilateral basal crepitations seen with 14 (28%) individuals. Out of 50 individuals studied, 39 (78%) had no hypoxia on air at presentation (i.e SpO<sub>2</sub> > 92% on air on presentation) whereas the rest 11 (22%) were hypoxic.



Looking at the clinical outcome of these patients after treating them with Tablet Oseltamivir (75mg) twice daily for 5 days, 6 (12%) of individuals expired whereas outcome was good in the rest 44 (88%). Of these 6 who expired 3 were males & 3 were females (50:50 ratio). Of these 6, 5 individuals were having one of the comorbidities. Of the 3 pregnant females enrolled in the study 2 (66%) expired and the rest 1 (33%) was discharged. Also 4 amongst these 6 (66%) of expired were above the age of 50 years suggesting high rate of mortality at higher age.

#### CONCLUSIONS:

The H1N1 (swine flu) influenza though eminently treatable, is potentially catastrophic viral infection that can lead to development of A.R.D.S which further is fatal. As it affects young to middle-aged population which otherwise is healthy, could be furthermore tragic. Associated Pregnancy, other medical comorbidities & old age further deteriorates the prognosis and outcomes in these patients. Timely initiation of Antiviral therapy can be beneficial. Early detection of swine flu through meticulous screening in the community with a high index of suspicion followed by prompt and adequate treatment can prevent disease transmission and explosion in various Urban settings. Creating awareness among the lay people about personal as well as public hygiene is also vital to prevent the spread of this viral illness.

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