

Original Research

Assessment of cases of Swine flu among adult patients- A clinical study

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ABSTRACT:

Background: The present study was conducted to assess the cases of swine flu among adult patients. **Materials & Methods:** The present study was conducted on 54 patients of swine flu of both genders. Clinical manifestations at presentation, investigations (complete blood count, renal function test, liver function test, chest X-ray, and arterial blood gas analysis), and outcome of all the cases were recorded. **Results:** Out of 54 patients, males were 32 and females were 22. Age group 10-30 years had 10, 30-60 years had 38 and >60 years had 6 cases. Common findings was high grade fever in 42, cough in 36, sore throat in 40, low blood pressure in 10, hemoptysis in 15, chest pain in 41 and breathlessness in 23. 25 cases had normal x-ray findings, 15 had consolidation, 10 had ARDS and 4 had ARDS+ Pleural effusion. **Conclusion:** Authors found that swine is becoming deadly at very fast rate. Vaccination, early recognition of the disease, and prompt initiation of treatment seem to be the only way to reduce H1N1 disease progression and associated mortality.

Key words: Influenza, Swine flu, Pandemic.

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INTRODUCTION

Influenza (H1N1) is very sensitive and newly emerged pandemic. Influenza (H1N1) pandemics are caused by new influenza viruses that have recently adapted to humans and resemble major natural disasters both in terms of recurrence and magnitude.¹ The earliest cases were identified in Mexico and southern California in April 2009. During the 2009 pandemic, there was an outbreak in India as well.² A re-emergence of H1N1 influenza cases has been noted since 2015, and the number of cases continues to rise. The number of swab-positive cases has increased in the year 2017 compared to yesteryears. Since the current circulating strain (A/Michigan/7/2009 [H1N1] pdm09) is different from the previous pandemic strains, a look into the clinical profile seemed imperative.³ Influenza-like-illness is a clinical diagnosis which can be used as a replacement for influenza disease in epidemiological researches.⁴ In surveillance programmes for influenza The Centers for

Disease Control and Prevention (CDC) suggest using the criteria fever plus cough or sore throat for ILI diagnosis.⁵ The European Centre for Disease Prevention and Control (ECDC) define ILI as; sudden onset of symptoms and at least one of the following fever or feverishness, malaise, headache, myalgia and at least one of the following three respiratory symptoms such as cough, sore throat, shortness of breath. All these symptoms are also associated with other viral ARTIs.⁶ The present study was conducted to assess the cases of swine flu among adult patients.

MATERIALS & METHODS

The present study was conducted in the department of general Medicine. It comprised of 54 patients of swine flu of both genders. Ethical approval was obtained from institute prior to the study. All were informed regarding the study.

General information such as name, age, gender etc. was recorded. A thorough clinical examination was done in all patients. Clinical manifestations at presentation, investigations (complete blood count, renal function test, liver function test, chest X-ray, and arterial blood gas analysis), and outcome of all the cases were

recorded. Treatment details including antiviral drugs (oseltamivir), requirement for ventilation, and use of other supportive measures were also recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

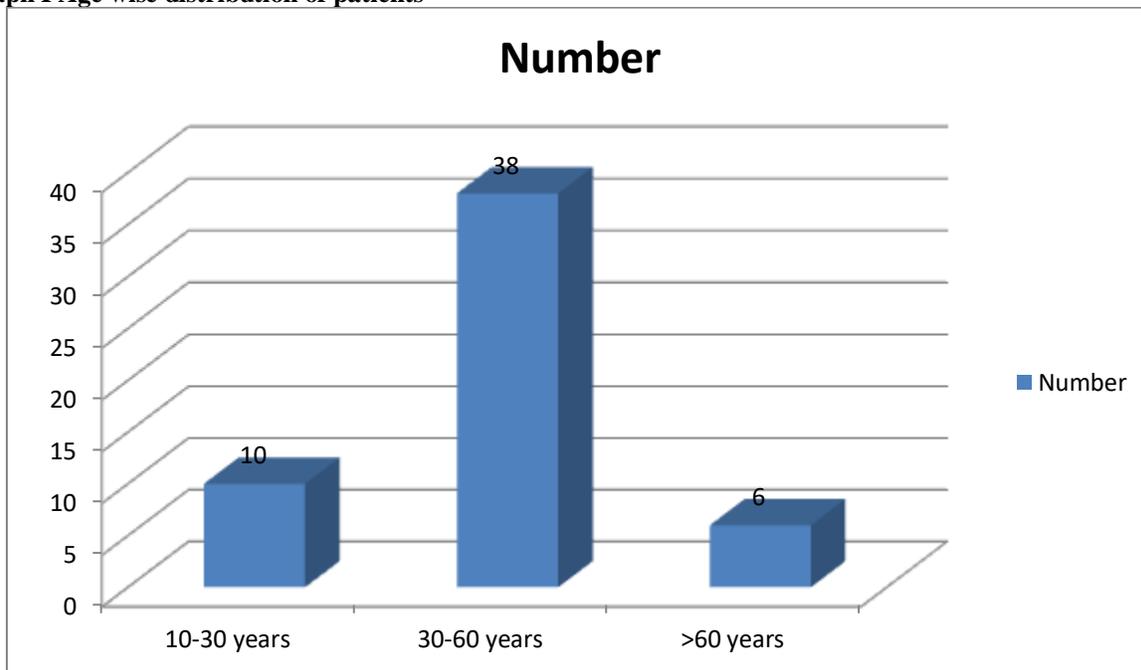
RESULTS

Table I Distribution of patients

Total- 54		
Gender	Males	Females
Number	32	22

Table I shows that out of 54 patients, males were 32 and females were 22.

Graph I Age wise distribution of patients



Graph I shows that age group 10-30 years had 10, 30-60 years had 38 and >60 years had 6 cases. The difference was significant (P< 0.05).

Table II Clinical presentation in patients

Clinical features	Number	P value
Fever	42	0.01
Cough	36	
Sore throat	40	
Low BP	10	
Haemoptysis	15	
Chest pain	41	
breathlessness	23	

Table II, graph II shows that common findings was high grade fever in 42, cough in 36, sore throat in 40, low blood pressure in 10, hemoptysis in 15, chest pain in 41 and breathlessness in 23. The difference was significant (P< 0.05).

Graph II Clinical presentation in patients

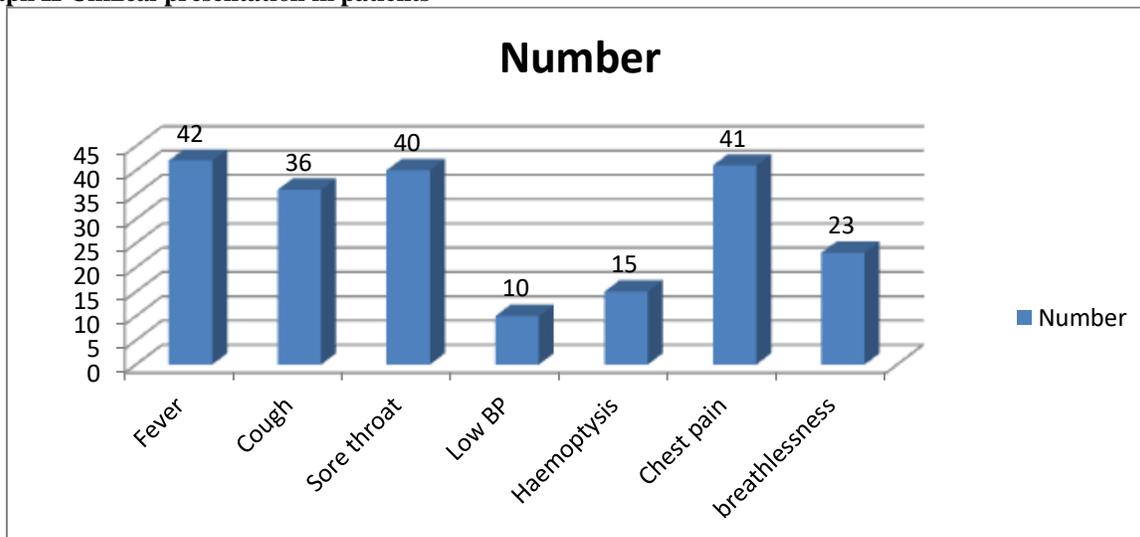


Table III Chest X- ray findings

Findings	Number	P value
Normal	25	0.01
Consolidation	15	
ARDS	10	
ARDS+ Pleural effusion	4	

Table III shows that 25 cases had normal x-ray findings, 15 had consolidation, 10 had ARDS and 4 had ARDS+ Pleural effusion. The difference was significant (P< 0.05).

DISCUSSION

The new Influenza-A (H1N1) virus is known to have sustained human-to-human transmission. Characteristics of this new virus are It was formed from triple-Reassortment of swine virus lineages, Continent of origin (North America, not Asia), Season for outbreak was different than usual influenza season (spring, not late fall), Cohort group at risk for infection (Children and young adults, not infants or elderly).⁷ Infection with influenza-a virus affects predominantly young population and usually leads to Acute Respiratory Distress Syndrome (ARDS) requiring intensive care in the ICUs.⁸ Secondary or super-added bacterial infection causing pneumonia is quite common (20-30%) in young patients of swine flu. Pregnancy and associated metabolic conditions are known to increase the severity of the disease and influence outcome.⁹ The present study was conducted to assess cases of H1N1 infection among adult patients.

In this study, out of 54 patients, males were 32 and females were 22. Taparia et al¹⁰ highlighted the differences in the clinical profile as well as outcome between the patients who survived the attack of swine flu and those who did not. Forty-five of these patients tested positive for H1N1 amounting to a positivity rate of 52.94%. Cough (93.3%) was the most common

symptom followed by fever (88.8%) and breathlessness (82.2%). Patients who did not survive were more likely to have associated co-morbid conditions like Hypertension, Diabetes, cardio-vascular disease, pre-existing lung disease and pregnancy though this was not statistically significant (p=0.189). Acute Respiratory Distress Syndrome (ARDS), Multi-Organ Dysfunction (MOD) and secondary bacterial infections were among the most common conditions that lead to death. Early detection of swine flu through meticulous screening in the community with a high index of suspicion followed by prompt and adequate treatment can go a long way in preventing another pandemic. Creating awareness among the lay people about personal as well as public hygiene is also vital to prevent the spread of this viral illness

We found that age group 10-30 years had 10, 30-60 years had 38 and >60 years had 6 cases. The common findings was high grade fever in 42, cough in 36, sore throat in 40, low blood pressure in 10, haemoptysis in 15, chest pain in 41 and breathlessness in 23. Choudhry et al¹¹ found that a total of 132 hospitalized children was studied. At least one respiratory virus was found to be positive by RT-PCR in 78 (59%) patients, influenza A (H3N2) was detected in only 8 (6%) patients. In 54 (41%) patients samples no respiratory viral pathogen

was detected and in 70 (53%) patients, one non-influenza A virus was detected. The respiratory viral pathogens detected in decreasing rates were RSV (n = 46, 35%), HCoV (n = 10, 7.5%), adenovirüs (n = 7, 5%), rhinovirüs (n = 6, 4.5%), HMPV (n = 5, 4%), Influenza B (n = 4, 3%) ve human Bocavirus (n = 2, 1.5%). In 10 patients, co-infection was detected, however none was with H3N2. In the H3N2 (+) group, the following risk factors were identified: age older than three years (p < 0.05), asthma history (p < 0.05) and chronic lung diseases.

We found that 25 cases had normal x-ray findings, 15 had consolidation, 10 had ARDS and 4 had ARDS+ Pleural effusion. Prasad et al¹² in their study a total of 76 confirmed cases of H1N1 influenza were detected. Most patients were between 51 and 60 years (25%). The predominant presenting symptoms were fever (98.7%), dry cough (61.8%), breathlessness (53.9%), and the most common auscultatory finding being bilateral crepitations (64.47%). Around 32.89% of cases presented with bilateral lung infiltrates on X-ray. Sixty-nine of 76 patients (90.79%) survived the disease. Patients with risk factors require additional attention as clinical course can be unpredictable. Pregnancy is associated with higher rate of complications. Early respiratory support helped in preventing progression to respiratory failure in most of our patients.

CONCLUSION

Authors found that swine is becoming deadly at very fast rate. Vaccination, early recognition of the disease, and prompt initiation of treatment seem to be the only way to reduce H1N1 disease progression and associated mortality.

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