

ORIGINAL ARTICLE

Assessment of cases of H1N1 infection among patients

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ABSTRACT:

Background: Influenza (H1N1) is very sensitive and newly emerged pandemic. The present study was conducted to assess cases of H1N1 infection among patients. **Materials & Methods:** The present study was conducted on 68 patients of H1N1 infection of both genders. Symptoms such as high grade fever, severe sore throat, breathlessness, chest pain, low blood pressure and haemoptysis was recorded. **Results:** Out of 68 patients, males were 32 and females were 36. Age group 10-30 years had 12, 30-60 years had 51 and >60 years had 5 cases. The difference was significant ($P < 0.05$). Common findings was high grade fever in 52, cough in 34, haemoptysis in 15, sore throat in 45, low BP in 11, breathlessness in 18 and chest pain in 48. The difference was significant ($P < 0.05$). Out of 68 patients, 52 survived and 16 died. The difference was significant ($P < 0.05$). **Conclusion:** Authors found that H1N1 infection is becoming pandemic. Common findings in patients were high grade fever, cough, haemoptysis, sore throat, low BP, breathlessness and chest pain.

Key words: Influenza, Hemoptysis, Sore throat

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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. The influenza virus known to be circulating as a pathogen in the human population since at least the 16th century is notable for its unique ability to cause recurrent epidemics and global pandemics. Genetic reassortments in the influenza virus cause fast and unpredictable antigenic change.¹

Influenza virus belongs to the orthomyxoviruses family and has three types named A, B and C. Influenza virus type A and B cause epidemic disease and the associated antigens are included in influenza vaccines.³ Type C influenza virus is associated with mild influenza-like illness and causes sporadic disease. It is estimated that, every year 15-42% of preschool and school-age children are infected with influenza virus. The severe disease is associated with low-income settings in children and 99% of deaths in children occur in developing countries.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. The European Centre for Disease Prevention and Control (ECDC) define ILI as; sudden onset of symptoms and at least one of the following: i) fever or feverishness, ii) malaise, iii) headache, iv) myalgia and at least one of the following three respiratory symptoms: i) cough, ii) sore throat, iii) shortness of breath. All these symptoms are also associated with other viral ARTIs.⁵ The present study was conducted to assess cases of H1N1 infection among patients.

MATERIALS & METHODS

The present study was conducted in the department of Internal Medicine. It comprised of 68 patients of H1N1 infection of both genders. All were informed regarding the study. Ethical approval was obtained from institute prior to the study.

General information such as name, age, gender etc. was recorded. A thorough clinical examination was done in all patients. Symptoms such as high grade fever, severe sore throat, breathlessness, chest pain, low blood pressure and haemoptysis was 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- 68		
Gender	Males	Females
Number	32	36

Table I shows that out of 68 patients, males were 32 and females were 36.

Table II Age wise distribution of patients

Age group (Years)	Number	P value
10-30	12	0.01
30-60	51	
>60	5	

Table II, graph I shows that age group 10-30 years had 12, 30-60 years had 51 and >60 years had 5 cases. The difference was significant (P< 0.05).

Graph I Age wise distribution of patients

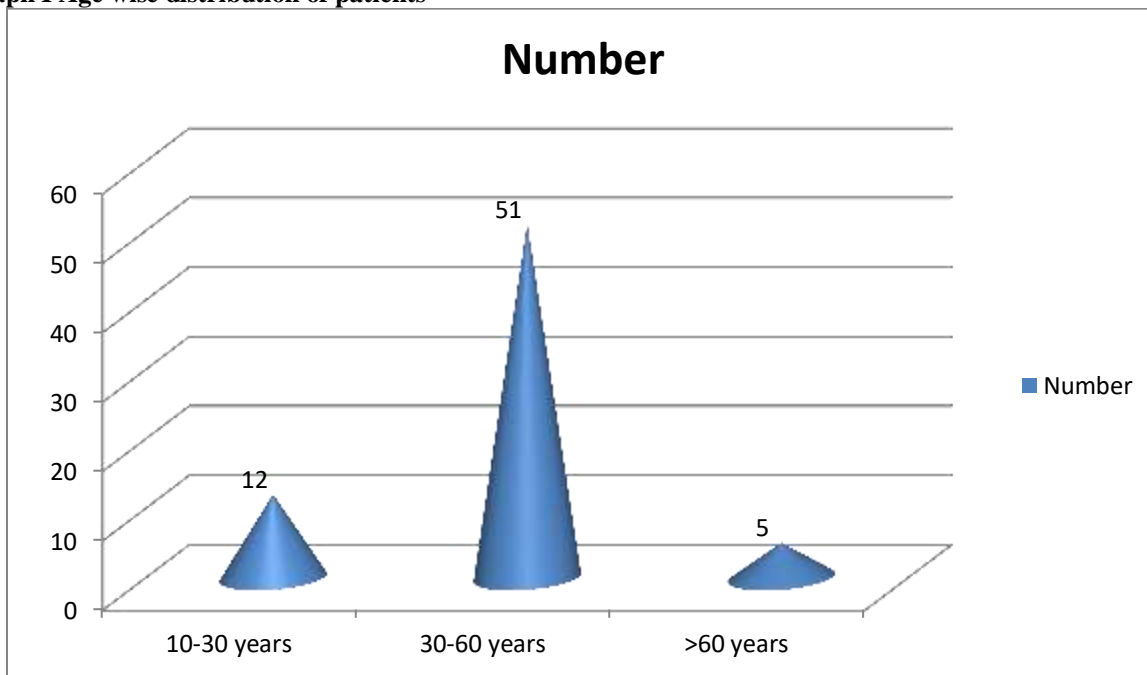
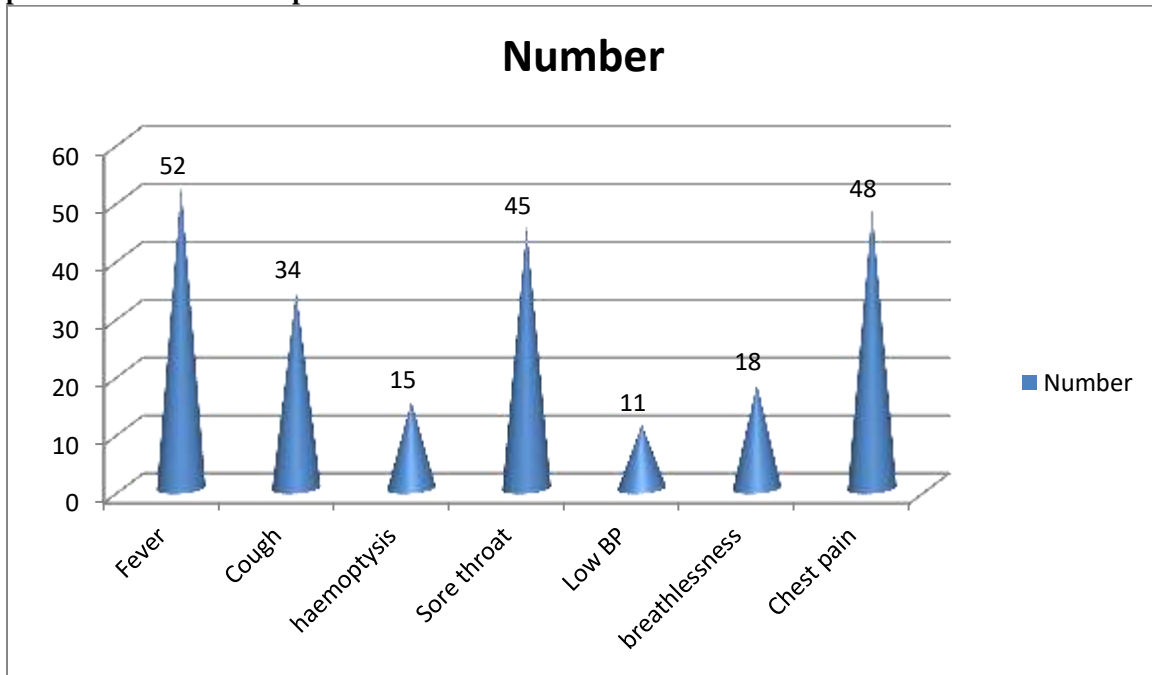


Table III Clinical features in patients

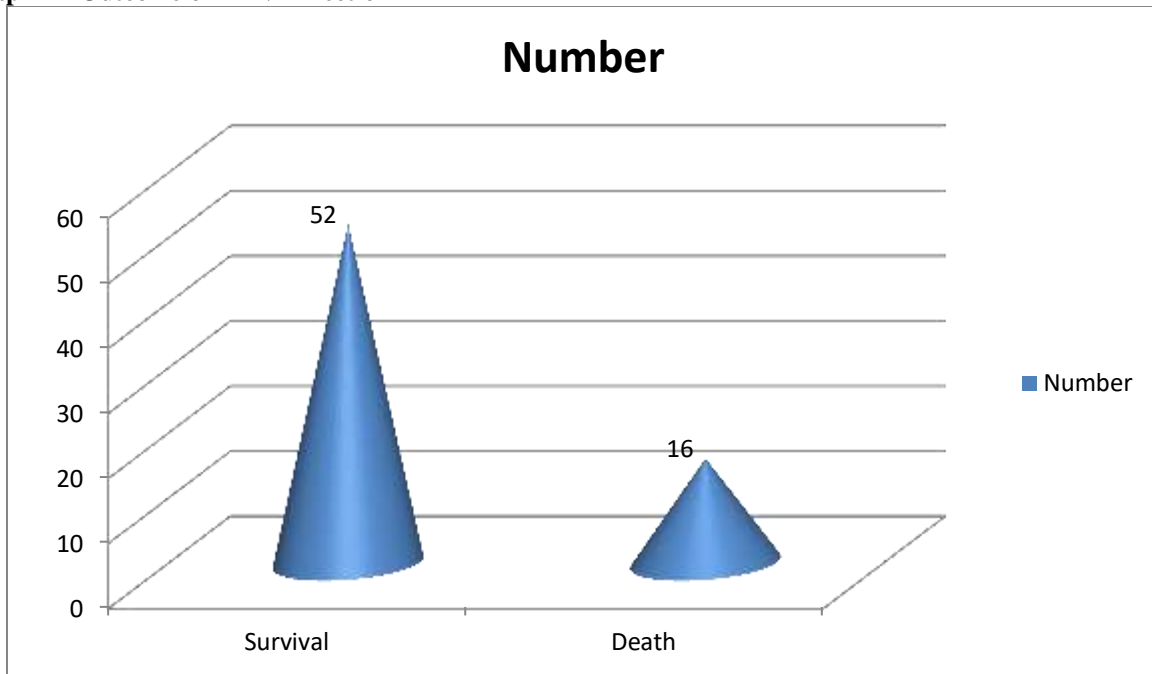
Clinical features	Number	P value
Fever	52	0.01
Cough	34	
haemoptysis	15	
Sore throat	45	
Low BP	11	
breathlessness	18	
Chest pain	48	

Table III, graph II shows that common findings was high grade fever in 52, cough in 34, hemoptysis in 15, sore throat in 45, low BP in 11, breathlessness in 18 and chest pain in 48. The difference was significant (P< 0.05).

Graph II Clinical features in patients



Graph III Outcome of H1N1 infection



Graph III shows that out of 68 patients, 52 survived and 16 died. The difference was significant ($P < 0.05$).

DISCUSSION

Influenza virus is a typical human pathogen causing serious respiratory illness, resulting in high mortality throughout the globe. It can cause widespread pandemics as it spreads easily from person to person. Outbreaks of various viral agents are common in India.

Timely diagnosis of these outbreaks is critical to mount appropriate public health response.⁶ The inadequacy of specialised virology laboratories in the country was noticed in the past as well as during the recent 2009 H1N1 pandemic. After 2009 pandemic, fewer confirmed cases were reported from Andhra

Pradesh. However, in January 2017, there was an exponential increase in the cases with influenza-like illness with increased positivity for influenza A (H1N1).⁷ The present study was conducted to assess cases of H1N1 infection among patients.

In this study, out of 68 patients, males were 32 and females were 36. Van Kerkhove et al⁸ conducted a study in which a total of 1286 samples were received for testing. The positive samples were influenza A unsubtypeable (109), influenza A (H1N1) pdm09 (356), influenza A (H3N2) (38) and influenza B (19; Victoria - 2, Yamagata - 17). There was no significant difference in positivity between genders with 260 (49.81%) females and 262 (50.19%) males being positive. Regular surveillance programmes are required for assessing the trends of influenza infections due to various subtypes and to plan timely and adequate steps for preventing the spread to larger vulnerable population.

We found that age group 10-30 years had 12, 30-60 years had 51 and >60 years had 5 cases. Common findings was high grade fever in 52, cough in 34, hemoptysis in 15, sore throat in 45, low BP in 11, breathlessness in 18 and chest pain in 48. Choudhry et al⁹ 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%), adenovirus (n = 7, 5%), rhinovirus (n = 6, 4.5%), HMPV (n = 5, 4%), Influenza B (n = 4, 3%) ve human Bocavirus (n = 2, 1.5%). In 10 patients, coinfection 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 common findings was high grade fever in 52, cough in 34, hemoptysis in 15, sore throat in 45, low BP in 11, breathlessness in 18 and chest pain in 48. Out of 68 patients, 52 survived and 16 died. Venkataramana et al¹⁰ conducted a study in which the total 110 cases of suspected H1N1 influenza were admitted in hospital. Of 110 total suspected cases, 91 (82.72%) were cured and discharged. Among these 91

(82.72%) suspected cases, 17 (15.45%) were laboratory confirmed for Influenza (H1N1).

CONCLUSION

Authors found that H1N1 infection is becoming pandemic. Common findings in patients were high grade fever, cough, hemoptysis, sore throat, low BP, breathlessness and chest pain.

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