

Outcome of suspected H1N1 influenza cases admitted in tertiary care Govt. Hospital Solapur, Maharashtra

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ABSTRACT

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. **Aims and Objectives:** To study the outcome and epidemiological factors of suspected H1N1 influenza cases. **Study Design:** Hospital-based descriptive study, **Study Period:** Study was conducted over a period of seven months from April 2009 to October 2009. **Study Variable:** Outcome, age, sex, time, place of residence. **Results and Discussion:** The total 110 cases of suspected H1N1 influenza were admitted in Infectious diseases ward of Government Hospital Solapur. Out 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:** In present study, maximum case fatality rate (32%) was observed in females in age group of 15-44 years as compared to male.

Keywords: Flue, H1N1, influenza, outcome

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 re-assortments in the influenza virus cause fast and unpredictable antigenic change.^[1]

During Influenza (H1N1) Pandemic 2009, the first case in India was reported on 15th May 2009 from Hyderabad and first death in India was reported on 6th July 2009 from Pune.^[2,3] The first case of suspected H1N1 influenza was reported on 8th August 2009 from Solapur. The total number of screened case were 4229 from which 110 cases were admitted in Infectious diseases ward of Government Hospital Solapur.

Aims and objectives

To study the outcome of suspected H1N1 influenza cases.

To study the epidemiological factors affecting it.

MATERIALS AND METHODS

Study design

This is a hospital based descriptive study, conducted on the cases admitted in Government Hospital Solapur as suspected Influenza (H1N1) cases from August 2009 to December 2009, over a period of 5 months. The above cases were interviewed at infectious diseases ward of this hospital on the same day of admission of patients. A pretested and predesigned questionnaire was used for data collection from patients and was analyzed on SPSS version 15.1.

Criteria's for admission of H1N1 influenza cases

Those patient were admitted as influenza cases with complaints of high grade fever and severe sore throat. patient with complaints of breathlessness, chest pain, low blood pressure and haemoptysis.^[4]

Study variable

The variables were outcome, age, sex, time, and place of residence.

RESULTS AND DISCUSSION

The total 110 cases of suspected H1N1 influenza were admitted in infectious diseases ward of Government Hospital Solapur [Table 1]. The maximum number of cases (50) was reported in the month of October [Figure 1]. Out 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 H1N1 influenza. Out of 110 total suspected cases, 19 (17.28%) died due H1N1 influenza. Out of 19 who died of H1N1 influenza, 10 cases (9.09%) were confirmed for H1N1 influenza (throat swab positive).

Out of 110 cases admitted, the male:female ratio was 1.5. A total of 74 (67.27%) were rural cases and 36 (37.73%) were urban cases. 80 (72.72%) were from Solapur district and 30 (29.09%) were from other than Solapur district, namely Osmanabad, Gulbarga district. Most cases were male from rural Solapur (44.5%) [Figure 2].

Out of Total 110 cases, the maximum number of cases was in age group of 15-44 years [Figure 3]. 57 (51.8%), followed by 0-5 years 18 (16.3%). The most common symptoms was fever (98%), and cough (96%). The maximum number of cases were 50 (45.5%) Figure 1 in month of October followed by August 24 (21.8%), September 18 (16.3%), November 12 (10.9%) and in December 6 (5.5%). From October onwards there was declining trend.

Table 1: Deaths of suspected H1N1 influenza cases

Sex	Cases (%)	Lab confirmed (%)	Death (%)
Male	67 (60.9)	15 (55.6)	6 (31.6)
Female	43 (39.1)	12 (44.4)	13 (68.4)
Total	110 (100)	27 (100)	19 (100)

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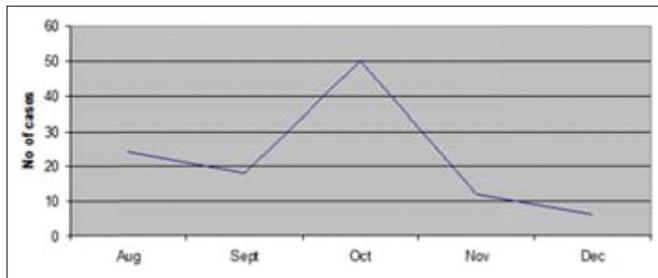


Figure 1: Time trend of suspected H1N1 influenza cases

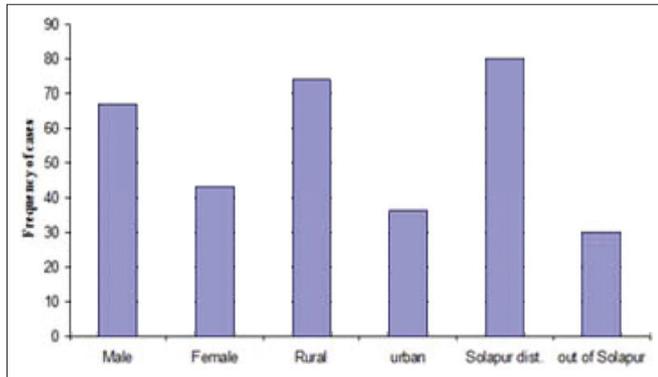


Figure 2: Sex and residence pattern of suspected H1N1 cases

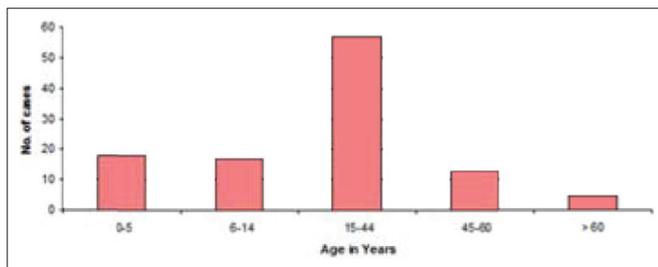


Figure 3: Age-wise distribution of suspected H1N1 influenza cases

Out of 110 suspected H1N1 cases, 27 were laboratory confirmed and 19 were deaths [Figure 4].

Out of 67 suspected H1N1 male cases, six cases were died and out of 43 female cases, 13 died. A still of H1N1 influenza patient on treatment in ICU from civil hospital Solapur [Figure 5]. According to Liam de Donaldson *et al* (5) from England the mid-range estimate for incidence of pandemic A/H1N1, the overall estimated case fatality rate was 26 (range 11-66) per 100000. It was lowest for children aged 5-14 (11 (range 3-36) per 100000) and highest for those aged ≥ 65 (980 (range 300-3200) per 100000). In the 138 people in whom the confirmed cause of death was pandemic A/H1N1, the median age was 39 (interquartile range 17-57). Two thirds of patients who died (92, 67%) would now be eligible for the first phase of vaccination in England. Fifty (36%) had no, or only mild, pre-existing illness. Most patients (108, 78%) had been prescribed antiviral drugs, but of these, 82 (76%) did not receive vaccine.

CONCLUSION

In the present study, maximum case fatality rate (32%) was observed in females (15-44 years). Most cases were male from rural Solapur. As suspected influenza H1N1, most cases (60.9%) reported were male while most death (68.4%) were female contributory to ignorance, illiteracy, and late reporting of female, immediate death within one day of admission were 12 (63.1%).

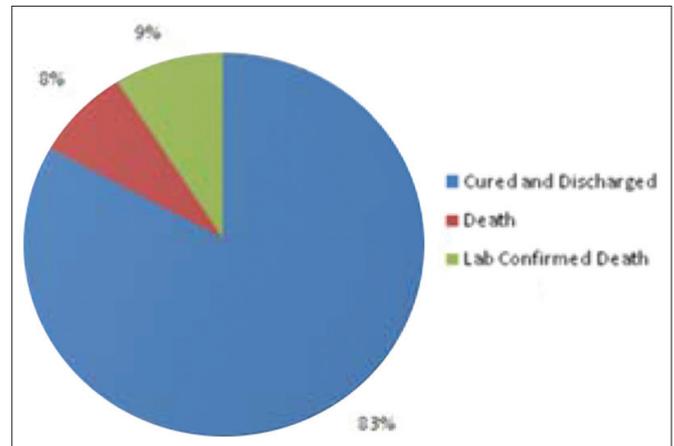


Figure 4: Outcome of suspected Influenza (H1N1) cases admitted in hospital



Figure 5: A patient of H1N1 influenza on ventilator admitted in ICU of Government Hospital

Recommendation

Health education as preventive measures for control of Influenza (H1N1) is essential.

There is need to increase awareness of publics about Influenza (H1N1).

Generally there is no need to become panic, as early suspicion, diagnosis and treatment with hospitalization reduces mortality due Influenza (H1N1).

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How to cite this article: Todkar SS, Gaikwad LA. Outcome of suspected H1N1 influenza cases admitted in tertiary care Govt. Hospital Solapur, Maharashtra. *Indian J Med Sci* 2017;69:6-7.

Source of support: Nil. **Conflict of Interest:** None declared.