



SWINE FLU – ANALYSIS OF OUTCOME IN WOMEN IN THE POST - PANDEMIC ERA

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ABSTRACT

Background: While declaring the post-pandemic phase in August 2010, the World Health Organization announced that the influenza A H1N1 virus will continue as seasonal influenza virus with sporadic as well as localized outbreaks in the post-2009 pandemic period [1]. This study aims to analyze clinical and epidemiological profile of suspected and diagnosed swine flu cases at a tertiary care center in Mumbai in the post pandemic phase.

Methods: A retrospective observational study was done at tertiary care institute in Mumbai.

Results: Out of the 533 that were suspected to have Swine flu, 129 tested positive. 22 adult females tested positive, 16 women were in the reproductive age group, of which 4 were from antenatal and 3 were postnatal groups. No maternal mortality was observed.

KEYWORDS : Swine flu, Influenza A (H1N1) virus, Pregnancy, Maternal Outcome.

Introduction

Swine flu is an emerging viral infection caused by Influenza A (H1N1) virus, first seen in Mexico in 2009 which later spread to United States and worldwide including India as a pandemic.

Seven years after the H1N1 pandemic of 2009-2010, the numbers of Influenza A - H1N1 cases are still high in Mumbai as well as nationally [2]. In 2017, the total number of lab confirmed cases and deaths of Influenza A - H1N1 nationally were 38811 and 2266 respectively [2].

Pregnant women have been noted to have 4 times higher risk of being hospitalized for complication compared to the non-pregnant population [4]. It is most likely that for some period of time, vulnerable groups, including pregnant women, will continue to be affected disproportionately by severe disease from H1N1; hence obstetricians need to be aware and vigilant to deal with this viral threat.

This study was carried out with an aim to assess the occurrence of swine flu in women of reproductive age group, presenting with acute febrile illness to tertiary care center and to evaluate the final outcome in terms of morbidity and mortality. It also assessed the impact of age and sex on the outcome.

We present here certain facts about the 2017 Influenza A - H1N1 outbreak.

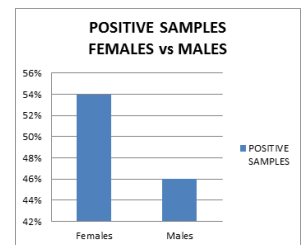
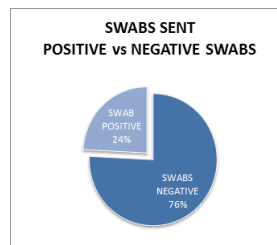
Materials and methods

A retrospective observational study was done in our hospital – a tertiary care center in Mumbai, Maharashtra in which we have analyzed all the cases from January 2017 to September 2017, who were confirmed or suspected to have Swine Flu. Patients presenting with acute febrile respiratory illness with clinical picture ranging from influenza to pneumonia were suspected to have Swine Flu and were investigated. All patients studied had laboratory confirmations of influenza A (H1N1) from respiratory secretion samples analyzed using the RT-PCR method, performed free of cost at the molecular biology laboratory at Kasturba hospital. The Infectious disease register record was reviewed. Detailed analysis of the confirmed / positive cases was done.

Results

During the period from January 2017 to September 2017 the total number of patients presenting to OPD with acute febrile illness were 1267. Out of these 533 (42.06%) were suspected to have Swine flu. Swabs were sent for these patients.

Among these patients 129 (24.20%) tested positive.



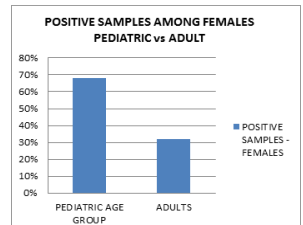
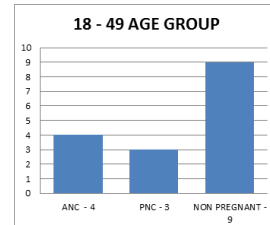
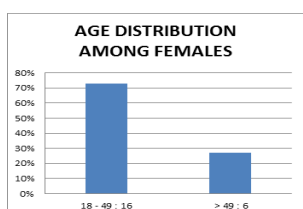
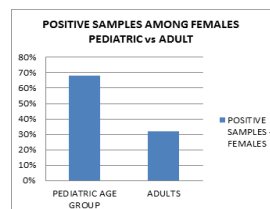
Among the total number of samples sent, 96 (18%) were of adults, while 437 (82%) belonged to pediatric age group.

According to the percentage of the 129 positive samples 46% were males and 54% were females.

There were 22 adult females who tested positive. Out of 22 adult women 16 women were in reproductive age group (taken as 18-49), of which 4 were antenatal and 3 were postnatal.

In the antenatal women, most common age group was 22- 27 years, Median age being 24.5 years. Among the pregnant patients, 1 was primigravida while 3 were multigravida. Gestational age most commonly was between 34-36 weeks i.e. in the third trimester.

Most common presenting complaint was Sore throat with fever, 2 presented with threatened preterm labour and 1 with preterm premature rupture of membranes (PPROM). Among the pregnant patients, 1 patient was anemic while 1 gave history of swine flu in family.



Maternal Outcome:

Of the 4 antenatal patients, 2 patients delivered vaginally at full-term, 1 delivered preterm and 1 underwent preterm LSCS, done for fetal distress (meconium stained liquor).

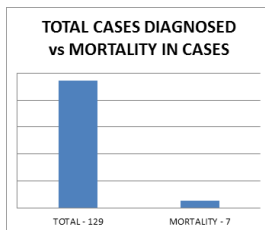
Fetal Outcome:

Out of the 4 fetuses, 2 were term babies and 2 were preterm. Only one required NICU admission. All the babies survived and were discharged healthy.

Total numbers of deaths attributed to Swine flu were 7 of these, 5 were pediatric age group i.e. the mortality percentage was 5.42%. No maternal mortality was observed.

It is worthwhile to note that suspected cases in whom samples were sent, most of them had received benefit of empirical treatment in line with WHO's Clinical management guidelines for infection with pandemic H1N1[3].

Taking into account the results of this study, 100 women of which 50 antenatal women were vaccinated in our institute after ethics committee clearance and results studied. No adverse reactions were observed. The results of this study will be published in due course of time.

**Discussion**

Regardless of the presence of pandemic, we still face a risk of disease^[1]. Based on available evidence, the Influenza A- H1N1 virus currently continues to pose a higher risk for severe illness in some groups, including young children, pregnant women, geriatric population and those with respiratory or chronic health conditions^[1]. The pregnancy outcomes are poor for women affected by the H1N1 influenza virus with a fivefold increase in the perinatal mortality rate and threefold increase in the preterm delivery rate^[5]. WHO recommends that countries should maintain monitoring, ensure preventive measures and more importantly ensure early recognition and appropriate treatment to reduce the impact of influenza^[1].

Obstetricians need to be prepared to provide the necessary care to address the increased morbidity, mortality, and pregnancy related complications associated with Influenza.

Our study results reinforce the importance of early identification and treatment of suspected influenza in the high risk population. It is worthwhile to note that pediatric population has higher morbidity and mortality rates.

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