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Editorial

Pneumonia and respiratory failure from Swine origin Influenza H1N1

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INTRODUCTION

Swine influenza (Swine flu) became alarming health concern when World Health Organization declared as "Public health emergency of international concern" on April 25, 2009. After documentation of human-to-human transmission of the virus in at least three countries of two WHO regions, the WHO raised the pandemic level to 6.¹ During the 1918, flu pandemic infected one-third of the world's population (an estimated 500 million people) and caused approximately 50 million deaths.² In 1976, an outbreak of swine influenza occurred in New Jersey, USA, which involved more than 200 cases, some of them severe, resulting in one death.³ In 1988, another fatality was reported as a complication of swine influenza. From 2005 until January 2009, 12 cases of swine flu were reported in the USA, but none were fatal.⁴ In 2009, cases of influenza-like illness were first reported in Mexico; the outbreak was subsequently confirmed as pandemic influenza A (H1N1).⁵ The currently circulating strain of swine origin influenza virus of the H1N1 strain has undergone triple re-assortment and contains genes from the avian, swine and human viruses. Incubation period is 2 to 7 days.⁶ Symptoms of the 2009 "swine flu" pandemic influenza A (H1N1) virus in humans are similar to those of seasonal influenza and of influenza-like illness in general. They include fever, cough, sore throat, body aches, headache, chills, and fatigue. In children, signs of severe disease include apnea, tachypnea, dyspnea, cyanosis, dehydration, altered mental status, and extreme irritability.⁷ Endemic influenza A (H1N1) (swine flu) tends to cause high morbidity but low mortality rates (1-4%). The most common cause of

death is respiratory failure; other causes of death are pneumonia, high fever leading to neurological problems, dehydration, and electrolyte imbalance. Fatalities are more likely in young children and the elderly.⁸

Patients having pneumonia and respiratory failure from swine flu are treated with oseltamivir, ceftriaxone, clarithromycin, levofloxacin, imipenem, cefipenem.⁹ Pneumonia can be defined as an infection of lung parenchyma; causative agents of pneumonia are bacteria, virus and fungi. Inflamed air spaces are filled with fluid evident in chest x-rays CXR.

Pneumonia can be further classified as community acquired pneumonia, nosocomial pneumonia, hospital acquired pneumonia, aspiration pneumonia. The causative organisms are *Streptococcus pneumoniae*, *Mycoplasma pneumoniae*, *Chlamydia* species and Hemophilus influenza respiratory virus. The usual antibiotics are macrolides such as azithromycin and clarithromycin or a tetracycline such as doxycycline is given. Along with pneumonia, patients with influenza A (H1N1) have developed rapidly progressive lower respiratory tract disease resulting in respiratory failure.¹⁰

As of the 2009, a total of 177 countries reported 182,166 cases of influenza A (H1N1) infection, 1799 of which were fatal.¹¹ A Centers for Disease Control and Prevention (CDC) report in 2009 provided details of the 30 patients who were hospitalized in California, USA, of whom six required admission to an intensive care unit ICU and four required mechanical ventilation.¹² In New York City, 909 patients with confirmed pandemic H1N1 influenza have been reported as of 8 July 2009; 225 (25%) have required ICU care and 124

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(14%) have required mechanical ventilation with 59 attributed deaths¹³

CONCLUSION

Hence-OIV infection can cause severe illness, the acute respiratory distress syndrome, and death in

previously healthy persons who are young to middle-aged. It is very important subject of today. There is a need to create awareness regarding various aspects moreover there is still need of further study regarding new horizons of research.

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