



The Influenza A(H3N2v) Variant Virus Surge

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Received 02 June, 2023; Revised 10 June, 2023; Accepted 12 June, 2023 © The author(s) 2023.

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The current seasonal Influenza vaccine is composed of three strains that is two influenza A strains (H1N1 and H2N2 subtypes) and one influenza B strain. Strains from influenza A and B viruses currently co-circulate in humans. Vaccination is recommended for all the patients those who are above 65 age and for those with chronic medical illness. Out of the three strains H3N2 influenza virus subtype predominated 3 times out of the last 5 times of quite acute influenza seasons. Introduced among the human population in 1968, H3N2 influenza virus have rapidly evolved both genetically and antigenically in an attempt to escape the host immune pressure which resulted addition of numerous N-linked glycans to the viral hemagglutinin (HA) which increased the overall net charge of the HA molecule and change their preferences in receptor binding, and altered the ability of neuraminidase (NA) to agglutinate red blood cells prior to the host entry.

What is H3N2v?

Influenza (Flu) is an infectious disease caused by influenza virus. Influenza A virus subtype H3N2 is a subtype of viruses that causes influenza. H3N2v viruses can infect birds and mammals. Influenza A H3N2 variant viruses with the matrix (M) gene from the 2009 H1N1 pandemic virus were first detected in people in July 2011. Infections with H3N2 have mostly been associated with prolonged exposure to pigs at agricultural fairs. In years the H3N2v strain out of many strains is the predominant, there are more hospitalizations.

From where does the name came?

H3N2v is a subtype of the viral genus Influenza A, which is an important cause of human influenza. The name of the virus derives from the forms of two kinds of proteins that is hemagglutinin (H) and neuraminidase (N). The H3N2v virus exchange genes for internal proteins with other influenza subtypes.

How does the pandemic spread and what is the condition of H3N2v in India?

The H3N2 viruses were first identified in U.S. pigs in 2010. During 2011, 12 human infections with H3N2v were detected. During 2012 there were multiple outbreaks of H3N2v which resulted in 309 reported cases.

H3N2v surge in India: The outbreak of the H3N2 influenza virus is reaching alarming levels in India. States and Union territories like Tamil Nadu, Delhi, Telangana, Andhra Pradesh, Goa, Bihar have witnessed a spike in cases, with one death reported in Haryana and Karnataka. India witnessed increase in hospitalization that triggers symptoms like fever, cold, cough and body aches. There has been a nearly 150 per cent rise in patients coming to OPDs with such type of complaints as per the report of doctors from Delhi, according to PTI.

How a person is infected from H3N2v?

Influenza viruses are generally transmitted from people to pigs and from pigs to people. The spread of the virus from pigs to people is thought to happen in the same way seasonal influenza is spread between peoples. When an infected pig coughs or sneezes infected droplets are created which can easily come in contact with the mouth or noses by inhalation or by touching something which has the virus on it.

How will we know that we are infected from H3N2v? Symptoms:

The symptoms of H3N2v infection are similar to those of the seasonal flu include fever, nausea, vomiting, body aches and respiratory symptoms including cough and runny nose.

Is there any vaccination or treatment for H3N2v?

Preliminary clinical studies have been taken on a vaccine named pilot H3N2v and it has lead to a significant immune response. Also, the same influenza antiviral drugs can also be used for the treatment of H3N2 in children and adults. The drugs include are oseltamivir, zanamivir, peramivir and baloxavir.

What are the that precautions that should be taken to avoid the spread of this virus?

The precautions that could be added in your routine to avoid a high risk of getting infected by this virus: As the virus is spread from pigs or pig areas we should try to avoid to take consumable items in pig areas and also avoiding close contact with pigs. If at all we have to come in contact to pigs we should wear personal protective equipment like protective clothing, gloves and covering the mouth and nose with masks. We should cover our mouth and nose with a tissue or our sleeves while coughing and sneezing and wash our hands often with water or alcohol-based hand rub before and after if we come in contact to pigs for a long time.

If You Get Sick: If we get infected or have any flu symptoms we should follow regular recommendations for seeking treatment for influenza.

Always consult a doctor if you are infected from flu from direct or close contact with pigs and tell him about the exposure. Health care providers will determine whether influenza testing and possible treatment are required like by prescribing some antiviral drugs.

Conclusion:

Since both regular cold and a flu or influenza are respiratory infections with many symptoms in common it is very hard to distinguish between the two. According to the Centers for Disease Control and Prevention (CDC) both the diseases are communicable the symptoms of influenza are more severe than common cold so are the consequences which may be dangerous such as bronchitis, pneumonia, sinus or ear infection can occur. Always consult a doctor if ever felt like infected from viral influenza and take up antiviral drugs if prescribed for betterment and cure.