



# REVIEW ON SWINE FLU (H<sub>1</sub>N<sub>1</sub>): A KILLER VIRUS

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## ABSTRACT

Swine flu (H<sub>1</sub>N<sub>1</sub>) is also known as swine influenza virus. Because, the past peoples who caught flu had direct contact with pig's (H<sub>1</sub>N<sub>1</sub>) was spreading fast around in the world, so the World Health Organization (WHO) called it a pandemic virus. Swine influenza (H<sub>1</sub>N<sub>1</sub>) and (H<sub>3</sub>N<sub>2</sub>) viruses spreads from firstly pig's or Avian bird and then person to person, either by inhaling the virus by the Nose or Mouth and touching surfaces contaminated with the virus when infected person expeued droplets through air way of coughing or sneezing. Swine flu (H<sub>1</sub>N<sub>1</sub>) is respiratory tract disease produces by the virus, it contagious viral infection causing droplets the virus. Interior virus including the genetic material, this virus is the envelope (H) spines and (N) protein. The medical diagnosis which is used of chest X-ray, routine blood test, and the CBC test to identify any sign and symptoms of swine flu infection. The swine flu antiviral drug is also known as *Neuraminidase*, this neuraminidase is essential for the virus to ability to multiply inside the body this proteins leads to stoppage of this viruses multiplication and arrest swine influenza viruses. Tulashi extract are used in Ayurvedic for a variety of ailment traditionally ,Tulashi is taken in various forms as herbal Tea ,dried powder ,fresh leaf or mixed with ghee.

## KEYWORDS

Transmission, Action of virus, Diagnosis, Treatment, Drug's used.

## INTRODUCTION

The swine flu is a disease of pig's that can in rare cases be passed to humans it is highly contagious respiratory disease cause by one of many influenza-A virus which is spread due to direct as well as indirect contact in aerosis and two or more infected pigs of this virus<sup>[1]</sup>.

H<sub>1</sub>N<sub>1</sub> swine flu (H<sub>1</sub>N<sub>1</sub>) is also known as swine influenza virus. Because, the past peoples who caught flu had direct contact with pig's (H<sub>1</sub>N<sub>1</sub>) was spreading fast around in the world, so the World Health Organization (WHO) called it a pandemic virus<sup>[2]</sup>.

Swine influenza is an acute, highly spread from one person to another person infection respiratory disease that results from infection with type A influenza virus. Pigs are the principle hosts of classic swine influenza virus (human infection) has been reported, but influenza-A does not appear to easily spread into human population. A virus is spread globally (H<sub>1</sub>N<sub>1</sub>) it is spread from pig's, poultry and small number of cats, dogs, infected person and other animal. The disease in swine (H<sub>1</sub>N<sub>1</sub>) found in commonly in USA in Midwestern, Canada, South America, Japan, Taiwan, Europe, China as well as found in Eastern Asia<sup>[3]</sup>.

The swine influenza virus is transmitted from one person to another person; symptoms including the swine flu (H<sub>1</sub>N<sub>1</sub>) are fever, chills, nausea, body pain, vomiting and fatigue<sup>[4]</sup>.

The swine origin (H<sub>1</sub>N<sub>1</sub>) influenza-A virus had detected in April 2009 in California USA<sup>[5]</sup>.

According to union Ministry of Health and Family welfares integrated disease Surveillance Project, CDC estimate the 151,700-575,400 people worldwide died from (H<sub>1</sub>N<sub>1</sub>) virus infection when virus had circulated. It's most occurs in younger than 65 years of age<sup>[6]</sup>.

### Classification of Virus

1. Influenza virus A
2. Influenza virus B
3. Influenza virus C<sup>[7]</sup>

#### Influenza Virus-A

Influenza A virus causes influenza in birds and some mammals and in the species of the genus *Alphainfluenzavirus* of the virus family Orthomyxoviridae. All the influenza A virus has been isolated from wild birds this disease is uncommon, newly, viruses are spreads from wild aquatic birds to poultry and this may cause and outbreak or give increases in the human influenza pandemics<sup>[8]</sup>.

#### Influenza Virus-B

Influenza B virus is known to infect humans and seals with influenza. The influenza virus B based on the antigenic properties of the surface glycoprotein Hemagglutinin influenza-B virus evolve slower than Viruses-A and faster than viruses -C, influenza -B mutates at rate 2 to 3 times slower than type A<sup>[8]</sup>.

#### Influenza Virus-C

Influenza virus C is the members of family *Orthomyxoviridae* influenza virus C is usually only associated with minor symptoms. Influenza virus-C is the composition of the amino acid and Influenza virus-D (50%), similar to level divergence between types A and B, while the types C and D has much greater than level of divergence from type A and B. Incubation period of the influenza virus C of 18-72 hours and infect the epithelial cells of the respiratory tract, influenza virus C is effect on upper respiratory tract. Type C is individuals of all ages, but is mostly affected in younger, children, the older and individuals with depends on health problem. Influenza viruses have one of the highest preventable mortalities in many countries of the world<sup>[8]</sup>.

## DISCUSSION

### Types of Flu

- Bird flu
- Swine flu causation Spanish flu in 1918
- H1N1 causation Hong-Kong flu in 1968
- H<sub>2</sub>N<sub>2</sub> causation Asian flu 1957

#### 1. Bird Flu

Bird flu is also known as Avian flu( H<sub>5</sub>N<sub>1</sub>) Bird flu ,viruses infected the bird's it's including the chickens, poultry, ducks, and wild bird's, Bird flu is spreads to birds in countries in Asia , Africa and Europe<sup>[9]</sup>.

#### 2. Flu

Flu is also known as Grippe, Influenza flu is a mainly infected on the respiratory system of the body, and the flu viruses enter in the body by the “Nose” or “Mouth”.

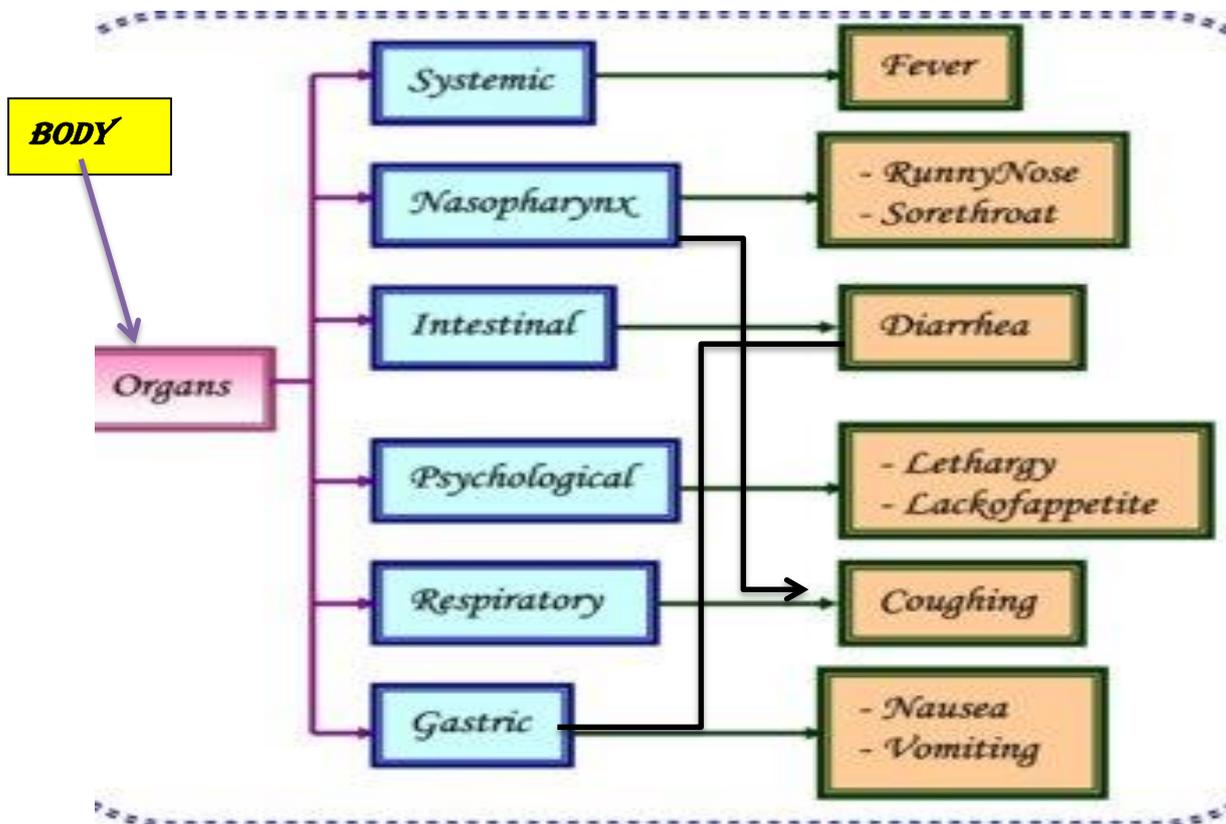
#### Symptoms

- Body muscle ache
- Chills
- Cough
- Fever
- Headache
- Sore throat

#### 3. Swine Flu

Swine influenza is an infection by a virus swine influenza is hog flu and pig flu swine influenza virus is common throughout pig populations worldwide <sup>[9]</sup>.

#### Signs and symptoms of the swine influenza (H<sub>1</sub>N<sub>1</sub>) <sup>[10]</sup>

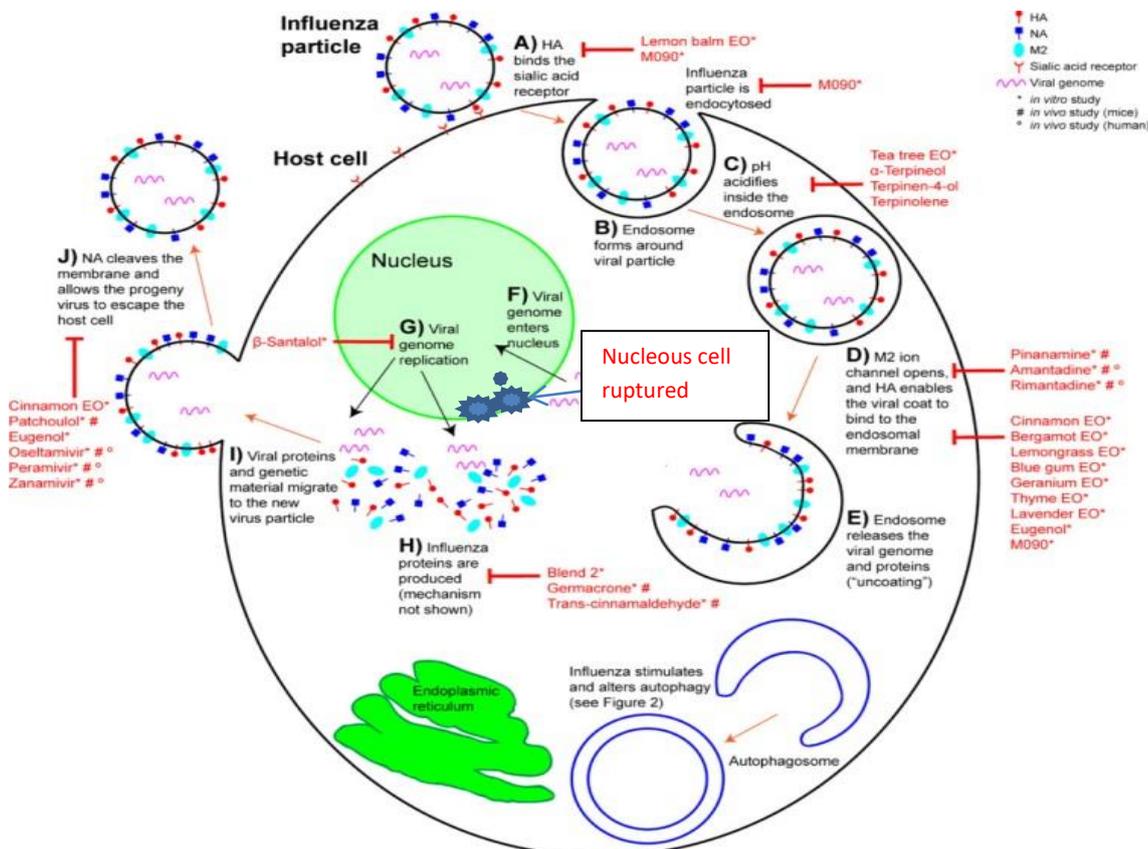


### Transmission

Swine influenza (H<sub>1</sub>N<sub>1</sub>) and (H<sub>3</sub>N<sub>2</sub>) viruses spread from firstly pig's or Avian bird and then person to person, either by inhaling the virus by the Nose or Mouth and touching surfaces contaminated with the virus when infected person expelled droplets through air way of coughing or sneezing<sup>[11]</sup>.

Swine flu can't be spread by pork products that is the virus is not transmitted through food the swine flu influenza in humans is most contagious in first five days of the illness, in commonly children, can be infected for up-to ten days<sup>[12]</sup>.

**Action of Virus in Body:**



**Diagram of action of swine flu virus in body [13].**

Swine flu (H<sub>1</sub>N<sub>1</sub>) is respiratory tract disease produced by the virus, it is a contagious viral infection causing droplets the virus form it is types.

**Interior Virus**

Interior virus including the genetic material, this virus is the envelope (H) spines and (N) protein.

The virus is transmitted in the cell and attach to the lipid cell membrane to allow the virus penetrate the cell and spread out the cell nucleus to attach H1 and N1 to create new virus, and this new viruses are produced the swine flu diseases.

Single cell produce new viruses this are viruses in their hosts cell to multiply itself and occurs the infection in the body in type of swine flu

**Diagnosis**

The medical diagnosis which is used of chest X-ray, routine blood test, and the CBC test to identify any sign and symptoms of swine flu infection [15].

The Center for Disease Control recommends real time, PCR choice for the diagnosis swine flu (H<sub>1</sub>N<sub>1</sub>) the oral and nasal fluid collection, RNA virus preserving filter paper cord is commercially available this method allows the specific diagnosis of influenza (H<sub>1</sub>N<sub>1</sub>) as opposed to seasonal influenza [16].

The diagnosis of the swine flu firstly doctor's like the physical examination of the infected person (Patients), look their sign and symptoms of swine influenza (H<sub>1</sub>N<sub>1</sub>) test that detects influenza

viruses physical examination test detect the weather a flu virus is the cause of your symptom's if swine flu infected person shows sign and other problem ,that's are following

- Heart disorder
- Respiratory disorder ,like as asthma
- Brain and nervous system problems <sup>[17]</sup>.

The test for swine flu influenza a 'nose' or "throat" *SWAB* test is taken within in minutes the laboratory may teu if swine influenza (H<sub>1</sub>N<sub>1</sub>) type-A or type-B is present the specimen of the infected material from the patient's throat or nose, collected within he first four to five days of illness it is the most infection period of the swine flu <sup>[18]</sup>.

### Treatment

Swine influenza (H<sub>1</sub>N<sub>1</sub>) virus caused by variant strain of the influenza virus, in the most caused the manifestations of the disease is similar to usual flu infection. The management of swine influenza virus is also at relieving the signs and symptoms of the disease. The infected person of patients need to medication of the drug's. That drugs opposes struggle against viruses, and multiply into the body are caused antiviral drug's <sup>[19]</sup> .

The disposal of the swine influenza virus's demand to home management which is an initial treatment of the swine flu.

This includes the,

- Patients need to rest
- Drink plenty of clear fluids
- For the body pain paracetamol and aceclofenac may be taken
- Aspirin is don't given to children in viral infection <sup>[19]</sup> .

### Drug's used in Swine Flu (H<sub>1</sub>N<sub>1</sub>)

#### Antiviral Drugs

The swine flu (H<sub>1</sub>N<sub>1</sub>) antiviral drug is also known as *Neuraminidase*, this neuraminidase is essential for the virus to ability to multiply inside the body this proteins leads to stoppage of this viruses multiplication and arrest swine influenza viruses.

The united states among drugs are available for use to stoppage and action and oppose to the swine influenza viruses <sup>[20]</sup>.

These drugs are,

- Amantadine
- Rimantadine<sup>[21]</sup>

#### Ayurveda Attend For the Treatment of Swine Flu

1. Tulashi
2. Aloe Vera

## Tulashi

The mostly eventful herbal plant which is used to improvement immune system of the body ,it is used for thousands years in Ayurveda for diverse healing properties Tulashi extract are used in Ayurvedic for a variety of ailment traditionally ,Tulashi is taken in various forms as herbal Tea ,dried powder ,fresh leaf or mixed with ghee.

The anti-viral property of Tulashi has been found by medical experts across recently, Tulashi improves the body overall defense mechanism it is ability fight opposes the swine influenza viruses and viral diseases <sup>[22]</sup>.

Tulashi used to,

- Relieve stress
- Enhance increases stamina
- Strengthen the immune system
- Relieve congestion and cold's flu
- Healthy metabolism
- Relieve inflammation /infection
- Lower cholesterol
- It's help to rich supply of antioxidants <sup>[23]</sup>

## Aloe-Vera

Aloe Vera has a long been praised for it is used to health benefits, Aloe Vera including many minerals that are vital to the increases health of the body immune system ,current studies to AloeVera tonic for immune system health and helps absorption of vitamins and minerals .Aloe is also anti-bacterial, Anti-viral and anti-inflammatory activity <sup>[24]</sup>.

The prominence of the present methodical review was on the awareness and knowledge regarding swine flu (H<sub>1</sub>N<sub>1</sub>) among dental professionals in India,the review focused on different type parameter 's mentioned in various types studies in order to accumulate information regarding swine flu two or more dental professionals which is evident from the results <sup>[25]</sup>.

## DIFFERENCE

NORMAL FLU	SWINE FLU
Infectious disease caused by an Influenza virus.	Infectious disease caused by Influenza A virus called H <sub>1</sub> N <sub>1</sub> <sup>[1]</sup> .
Symptoms : High fever Runny nose Sore throat Muscle pain Headache Coughing Feeling tired <sup>[26]</sup>	Symptoms: Fever Chills Cough Sore throat Stuffy nose Red eyes Body aches Fatigue Diarrhea Nausea Vomiting <sup>[27]</sup>
Drugs used Baloxavir marboxil, (xofluza),oseltamivir(Tamiflu) or zanamivir(Relenza)	Drugs used Antiviral drugs Amantadine, Rimantadine. <sup>[21]</sup>

## CONCLUSION

Conclusion is a seasonal influenza virus (H<sub>1</sub>N<sub>1</sub>), it's a epidemics has been long time and periodically this disease is a severe enough to produce the pandemics. The most available influenza pandemics produced in 2009, WHO declared the novel H<sub>1</sub>N<sub>1</sub>influenza flu virus to be pandemic, the action of swine flu viruses The virus is transmitted in the cell and attach to the lipid cell membrane to allows the influenza virus and penetrate the cell membrane as well as the spread out the cell nucleus to attach H<sub>1</sub> and N<sub>1</sub> to create new virus.

## ACKNOWLEDGEMENT

The authors are greatly thankful to Matoshri Miratai Aher College of pharmacy Karjule harya, Tal-Parner, Dist. – Ahmednagar for providing all facilities to these review paper.

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