



Assessing the impact of Nipah virus on human being, in India

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ABSTRACT

The Nipah virus was found in Kozhikode district in Kerala State of the India, to this outbreak in May 2018. At that time, get the confirmation report of the National Institute of Virology, Pune (M.S), and detected Nipah virus specific in antibodies livestock serum sample from Kerala state. Nipah virus (NiV) is a zoonotic virus (it is transmitted from animal to human) and can also be transmitted through contaminated food or directly between people. In infected people, it affects a range of illnesses from asymptomatic infected to acute respiratory illness, fever, fatal encephalitis, mental confusion, vomiting muscles pain, sore throat, dizziness, pneumonia and unconsciousness as well as coma or death. Nipah virus has caused only a few known outbreaks in India. It infects a wide range of animals and causes severe disease and death in people. In May 2018, Nipah virus outbreak was reported in the Kozhikode district of Kerala, India. The seventeen people's deaths were recorded, including one healthcare worker. Those who have died were mainly from the district of Kozhikode and Malappuram, including a 31 years old nurse, who was treating persons infected with the virus. The present investigations are attention is given mostly to studies assigning the impact of the Nipah virus on human bodies.

Keywords: Nipah virus, Bats and Human

INTRODUCTION

India is one of the countries in South Asian region. A large number of human populations are India. The county is hot spot of diversity in the world. India needs to bolster its efforts of protect its population and economy from emerging disease. In the recent, many infectious diseases of emerging and nature have entered this subcontinent and affected a large number of populations. A few diseases are Chikungunya virus, Massilia virus, Bhanja virus, Hendra virus, Henipa virus, Palma virus, Pandemic influenza, severe acute respiratory syndrome, Avian influenza, Corona virus, Ganjam virus and Palma virus etc. these disease have not only affected human and animal health but also economy of the country on a very large scale (Charrel RN, Moureau *et al.*, 2009; Eaton, Broder 2006; Halpin *et al.*, 2000; Mackenzie *et al.*, 2003; Shah and Work, 1969; Yadav *et al.*, 2011).

The current outbreak likely began when people drew water from bat infected well, according to the India. The Nipah virus naturally resides in fruit bats across south and Southeast Asian region and can spread to human through contact with the animal's bodily fluids.

Recently as the world is conformed with another Ebola outbreak this time in the Democratic Republic of Congo, India is dealing with a microscopic demon of its own a Nipah virus outbreak in Kerala, while epidemiologist are stilling trying to ascertain the transmission route of the disease in a Kerala. First, there is a significant need to understand the human –animal-environment interface or one health aspects of Nipah virus transmission. This is especially relevant given the virus's reservoir in the Pteropus fruit bats, the evidence of disease in pigs and other domestic animals and the association of anthropogenic or manmade factors with the emergence of novel disease (Charrel *et al.*, 2009; Luby, 2012; Tan *et al.*, 1999).

The recent Nipah virus outbreaks are a repeat of Siliuri, West Bengal in 2001 and 2007. South Asia is, in fact, a major hotspot for both the emergence of zoonotic disease (animal borne) and climate change impacts, high density of population, rapid urbanization, climate intensification mobility and close proximity with livestock are all factors that make south Asia vulnerable to emerging zoonosis and their aftermath. The Nipah virus is believed to be transmitted from animal to human. According to the WHO, fruit bats are the natural hosts of the disease (WHO, 2018; Chadha *et al.*, 2006).

Nipah virus can cause serious illness in people. A many of these cases seem to be acquired directly from bats by drinking raw date palm sap, a widely consumed local delicacy. The sap is thought to become contaminated when bats visit and drink from unprotected sap collection sites at night. Fruit bat of the genus Pteropus are the main reservoir hosts for Nipah virus. The P. vampyrus the Malayan flying fox, are known to carry this virus in Malaysia, P. giganteus is thought to be an important host in Bangladesh and India and possibly other locations (Chua, 2003; Chua *et al.*, 2001; Hsu *et al.*, 2014; Islam *et al.*, 2016; Luby *et al.*, 2009). Although live virus has not yet been isolated from this species, Nipah virus, RNA has been detected and many bats are seropositive. Nipah virus also occurs in P. lylei in Thailand and Combodia and P. poliocephalus has been infected experimentally. Viral RNA and antibodies have been found in a few other species of fruit or

insectivorous bats (Reynes *et al.*, 2005; Wacharapluesadee *et al.*, 2005; Yadav *et al.*, 2012).

The natural reservoir for Nipah virus is Pteropid fruit bat and direct to human transmission can occur frequently as a result of consumption of fruit product or raw date palm sap (Juice) contaminated with urine or saliva from infected fruit bats was the most likely source of infection. Alternatively, limited human to human transmission of NiV has also been reported among family and care givers of infected NiV person. Indian hero nurse are died battling Nipah virus to be attacked. The Nipah virus is a Kozhikode district, Kerala state some people have been panicked (Lini Puthussery, 2018; Hindustan Times, 2018; Bever Lindsey (2018). Recently, in India Nipah virus disease outbreak was reported from Kozhikode district of Kerala on May 2018. This is the first NiV outbreak in south India.

The purpose of this present paper is an assessing the impact of Nipah virus on human health.

HISTORY OF THE NIPAH VIRUS:

The Nipah virus was first discovered about twenty years later. Nipah virus was identified in a village named Kampung Sungai Nipah (Nipah river village) in Malaysia in 1998 and reached Singapore. A new strain occurred in Bangladesh and neighboring part of West Bengal and Siliguri region of northern part of India since 2001. Fruit bats and other animal are the likely sources NiV that infected people. Many of these cases seem to be acquired directly from bat by drinking raw date palm sap, a widely consumed local delicacy. The sap is then either consumed fresh as a sweet drink a delicacy similar to sugar cane juice or allowed to ferment. Human may become infected with Nipah virus when bats come at night time to lick the trunks of the trees as the sap is flowing down and as they enjoy a sugary drink. And they contaminate the sap or underlying pot with urine or saliva carrying the virus. (Chan *et al.*, 2002; Chua *et al.*, 2001).

SIGNIFICANCE AND SYMPTOMS OF NIPAH VIRUS:

Nipah virus is viral infection caused by the Nipah virus. Nipah virus typically takes five to fifteen days for symptoms of an infection to start to appear. Some people can also experience to typical pneumonia and severe respiratory problems. Infected people initially develop symptoms including fever, headaches, muscle pain, vomiting and sore throat; this can be followed by dizziness, drowsiness, altered unconsciousness and

neurological signs that indicate acute encephalitis. The long term side effects among survivors can include convulsions and personality changes (Nipah virus, 2017, May-2018; Luby, Stephen, 2009).

Incubation period of NiV:

The incubation period of Nipah virus is believed to range from 5 to 14 days. However, an incubation period as long as 45 days has been reported.

Risk of exposure of Nipah virus:

The person to person transmission has been documented and exposure to other Nipah virus infected individuals is also risk factors. In the Malaysia and Singapore outbreak, Nipah virus infection was associated pigs.

In Bangladesh and India, where outbreak Nipah virus infection is more frequent, exposure has been linked to consumption of raw date palm sap and contact with bats (Luby, Stephen, 2012).

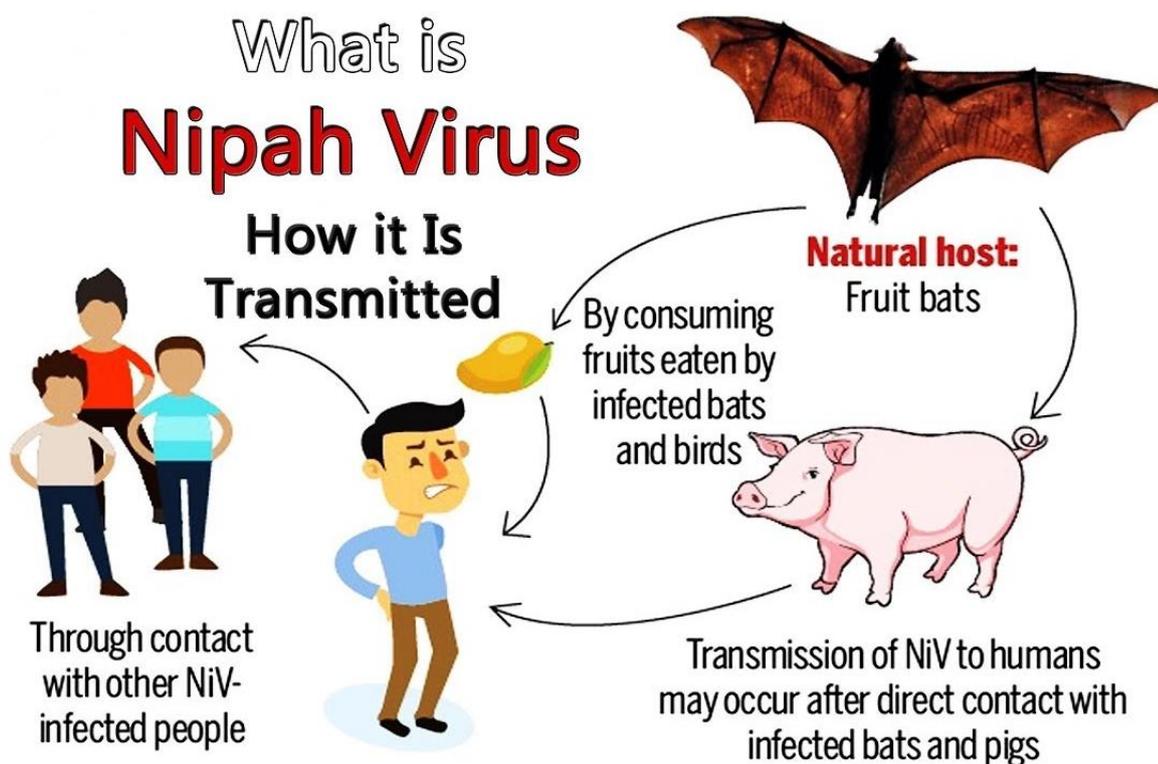


Fig -1: Primary host indicates of the Nipah virus- Bat and Pig transmitted to Human.

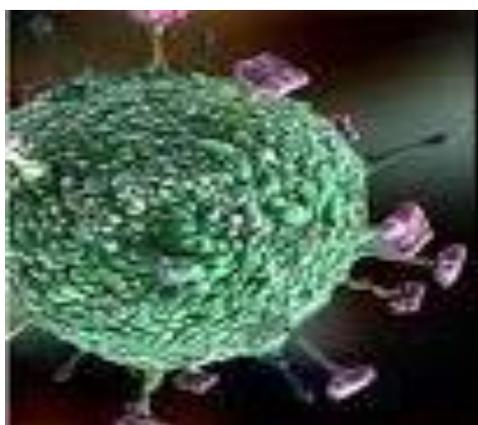


Fig-2: Host contaminated saliva into the fruit. Fig-3: Nipah virus in human body.

DIAGNOSIS:

Nipah virus infection is nonspecific. The accurate diagnosis and creates challenges in outbreak detection, effective and timely infection control measures and outbreak response activities. Nipah virus infection can be diagnosed with clinical history during that acute and convalescent phase of the disease. The main tests used are renal time polymerase chain reaction (RT-PCR) from body fluids and antibody detection via enzyme linked immunosorbent assay (ELISA) test will be confirmed as a Nipah virus (<https://www.Nipah/diagnosis>; Retrieved 24 May 2018).

IMPACT OF NiV ON HUMAN BODY:

The Nipah virus is spread to human who have direct contact with animals that are infected, like fruit bats or pigs. It can also spread between people, often between family and caregivers of people are infected. Nipah virus impacts on the human body that causes sudden fever, Nausea and vomiting, headache, sore throat, light sensitivity, stiff neck and back, drowsiness and irritability, Dizziness, unconsciousness (coma) and finally death.

TREATMENT OF NiV:

Currently, there are no available drugs as well as vaccines for Nipah virus infection. WHO has identified Nipah virus as a priority disease for the WHO research and development Blueprint. Intensive supportive care is recommended to treat severe respiratory and neurologic complications; however, some researchers suggest that the antiviral drug ribavirin may be useful (Broder *et al.*, 2013; WHO, 2018; Retrieved 24 May 2018).

PREVENTION OF NiV:

Avoiding consuming partly eaten fruits or unpasteurized fruit juices. Boil freshly collected raw date palm juice before consuming. Thoroughly washed and peel fruits before consuming. Avoid close unprotected physical contact with infected people and wash hands regularly with soap. The maintained your and children personal hygiene and cover your household properly. To use the higher grade masks. Th Nipah virus also has been prevention better than cure. (Retrieved 24 May 2018).

It is concluded that the natural hosts of the Nipah virus are fruit bats occurred in Malaysia, Bangladesh and India. Nipah virus encephalitis is a zoonotic disease. This disease is naturally transmitted from vertebrate animals to human and also the other way around. Zoonotic

disease has been identified for many countries but they have had a greater impact on public health in recent year with greater mingling to human and animal ecosystem. These are Nipah virus effect on human such as fever, headache, muscle pain, mental confusion, vomiting, sore throat, dizziness, acute respiratory syndrome, typical pneumonia and unconsciousness , coma and finally potentially death. Recently, May 2018, in India, Kozhikode district in Kerala state has just faced on outbreak of Nipah virus.

I hope that , no encouraged to see many Indian news stories reminding readers that bats are both not to blame and are ecologically important. The evidence suggests that the Nipah virus is rarely found even in these bats.

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