

## Nipah Virus Case in Kerala

### Why in news?

A youth from Ernakulam district in Kerala has tested positive for the Nipah virus infection (a year after a similar outbreak in Kerala had claimed 17 lives).

### What is the Nipah virus infection?

- **Cause** - The natural host of the Nipah virus are fruit bats of the Pteropodidae family and Pteropous genus, widely found in South and South East Asia.
- However, the actual source of the current infection is not yet known.
- Scientists are currently working on finding the epidemiological link of the outbreak.
- **Transmission** - The infection is generally transmitted from animals to human beings, mainly from bats and pigs.
- Human-to-human transmission is also possible, and so is transmission from contaminated food.
- **Effect** - Nipah virus causes a so far incurable infection in human beings, which can sometimes be fatal.
- Patients either show no symptoms of the infection (asymptomatic infections), thereby making it difficult to detect.
- Otherwise, patients develop acute respiratory problems, or encephalitis that often becomes fatal.
- The World Health Organization (WHO) says the infection has been found to be fatal in 40% to 75% of the infected patients.
- There is **no treatment** available as of now, either for humans or animals, nor any vaccine.



### What are the previous incidents of infection?

- Nipah virus infections were first identified in 1999 in Malaysia.
- From then on infections have been detected quite frequently in Bangladesh.
- **Kerala** - There have been a few incidents of infection in India earlier, apart from the 2018 outbreak in Kerala.
- The 2018 outbreak was confined to two districts of Kerala, Kozhikode and

Malappuram.

- Studies have revealed that a particular kind of fruit bat, *Pteropus* spp, was most likely the source of human infection in 2018.
- Research suggested that this particular strain might have been circulating in the local bat population.
- The newly detected case in Kerala is believed to have actually been a result of intensified preventive and containment efforts after last year's outbreak.
- The increased awareness and vigilance in the community has helped in early detection this time.
- **Elsewhere in India** - The first outbreak was in 2001 in Siliguri, West Bengal.
- More than 30 people were hospitalised with suspected infection then.
- Another outbreak happened in 2007 in Nadia of West Bengal, with over 30 cases of fever with acute respiratory distress and/or neurological symptoms.
- Notably, five of them turned out to be fatal.

### Who are potentially at risk?

- Transmission to 18 contacts last year and the two health-care workers this year has been only through the human-to-human route.
- As of now, the current outbreak is likely localised, like last year's.
- More people showing symptoms are being screened and so are people in physical contact with them.
- Those with exposure to body fluids (saliva, urine, sputum) of infected patients had higher risk for asymptomatic infections, than those who only had physical contact with the infected patients.

### What are the measures taken?

- The National Institute of Virology (NIV) advised extreme care for healthcare workers and caregivers.
- These include providing double gloves, fluid-resistant gown, goggles, face shields, closed shoes and similar other protective gear.
- Currently, steps are being taken to prevent the spread of the disease by tracing the contacts, setting up isolation wards and public engagement.

### What is the way forward?

- Containing the spread of the Nipah virus is important as the mortality rate was 89% last year.
- The recurrence of the infection possibly suggests that the virus is in circulation in fruit bats.
- Analysing the evolutionary relationships, a study found 99.7-100% similarity

between the virus in humans and bats.

- The confirmation of the source and the recurrence mean that Kerala must be alert to the possibility of frequent outbreaks.
- It is high time that the state takes continuous monitoring and surveillance for the virus in fruit bats.
- One reason for the failure in not doing so till now could be the absence of a public health protection agency.
- The government has been in the process of formulating it for over 5 years now, to track such infective agents before they strike.
- The state should also equip the Institute of Advanced Virology in Thiruvananthapuram to undertake testing of dangerous pathogens.

**Source: Indian Express, The Hindu**

### **Quick Fact**

#### **National Institute of Virology**

- The National Institute of Virology is one of the major Institutes of the Indian Council of Medical Research (ICMR).
- It was established at Pune, Maharashtra in 1952 as Virus Research Centre (VRC) under the auspices of the ICMR and the Rockefeller Foundation (RF), USA.
- It was an outcome of the global programme of the RF for investigating the Arthropod Borne viruses.
- The RF withdrew its support in 1967 and since then the Institute is entirely funded by the ICMR, taking up intensive training and research in virology.