



Letter to the Editor

Emerging threat: Nipah virus - A call for global preparedness and vigilance

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Dear Editor,

Similar to coronavirus, the Nipah virus disease is a highly virulent, single-stranded RNA virus of the Paramyxoviridae family. It is prone to mutation, which increases its virulence, transmissibility, and lethality and raises the possibility of posing a threat globally [1]. Between September 1998 and April 1999, the Malaysian-Singaporean peninsula saw the first human cases of Nipah Virus (NiV) infection. Malaysia, Singapore, India, Bangladesh, and the Philippines were among the countries where its outbreaks occurred [2]. The NiV first appeared via a domestic animal intermediate amplifying host (pigs), and it appears that fruit bats (*Pteropus* species) are its natural host. However, some of the recent outbreaks in Bangladesh may have involved both human-to-human and direct bat-to-human transmission. There are three possible routes of transmission, including eating fruit contaminated with NiV, coming into close contact with infected human bodily fluids, or getting in touch with the excretions or secretions of infected animals. This emphasizes the significance of promoting knowledge and understanding about the risks associated with ingesting raw palm juice and the necessity of adopting appropriate sanitation and hygiene practices in order to stop the virus from spreading [2,3].

A new NiV outbreak reported in Bangladesh, has raised concerns about the possibility of a zoonotic epidemic. According to the Business Post report, on January 16, 2024, there was a single case for the year, while as of January 29, there were two cases total with two fatalities, meaning that the case-fatality ratio (CFR) is at 100%. The situation is regrettable since, as of 2024, 23 years have passed since the initial NiV outbreak in Bangladesh in 2001. As a result, there has been little research conducted on the virus, which has prevented the development of a vaccine or significant pharmacotherapy for NiV to date [4]. The death rate of NiV-infected people is concerning because it is linked to common symptoms, including encephalitis, which ranges from 40% to 75%.

The virus is an emerging threat to global public health because there is no specific therapeutic intervention for infected individuals; instead, supportive care such as ventilation and intensive care unit treatment for respiratory distress and anticonvulsant medication for seizure prevention against secondary infection are provided to infected individuals. In order to combat this new threat, scientists must conduct research to

develop vaccines and evidence-based treatments, much like they did with COVID-19. Even though creating these vaccines and treatments will cost a lot of money in terms of facilities and personnel, the benefits are enormous, as will the number of lives that will be saved. Similar to COVID-19, the current state of *trans*-border and regional dissemination, as well as a confirmed case of secondary transmission from human to human, indicate that NiV is a virus that might potentially result in a worldwide public health emergency [5]. To avert this kind of circumstance, careful planning and extensive forethought in the spirit of worldwide readiness and solidarity are required.

In brief, preventive measures should be strictly followed since there is no specific treatment intervention for the population infected with NiV, but supportive care, such as the provision of ventilation administration, should be made available in areas where there is a possibility of an outbreak. In order to prevent an unanticipated outbreak, care should be taken when consuming date palm sap and interacting with intermediary species that are the virus's hosts, such as pigs, bats, and horses. These animals are being closely watched and quarantined. Contact tracing and isolation of anyone who consumes raw date palm sap and has obvious signs and symptoms should be instituted as soon as possible to stop the infection from spreading. This will help contain the pandemic. For this reason, thorough health education and campaigns to increase awareness about NiV should be planned for the elderly and those living in rural areas who are not used to modern medical procedures. To increase our chances of averting a widespread epidemic, we need to have strong global preparedness indices, a "one-health" approach that includes surveillance, quick case detection, diagnosis, and management of human and animal cases, risk communication and preventive measures, and community involvement in effective response. After all, the world is not ready for another pandemic like COVID-19 [3–5].

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