Editorial
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Nipah Virus: Human-to-Human Transmission and Implications for Public Health Surveillance in Colombia

Virus Nipah: una amenaza zoonótica emergente con transmisión humano-humano y lecciones para la vigilancia en Colombia

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The recurrent emergence of highly lethal zoonotic diseases represents a significant challenge to global public health. In this context, Nipah virus (NiV), a member of the genus *Henipavirus* (family *Paramyxoviridae*), has been identified by the World Health Organization as a priority pathogen with epidemic potential due to its high case-fatality rate, the absence of licensed vaccines or specific antiviral therapies, and documented evidence of person-to-person transmission [1].

NiV was first identified during an outbreak in Malaysia and Singapore between 1998 and 1999, primarily associated with transmission from infected pigs to humans, resulting in more than 260 cases and a case-fatality rate of approximately 40% [2]. Since 2001, Bangladesh has reported recurrent outbreaks, frequently linked to the consumption of raw date palm sap contaminated by fruit bats of the genus *Pteropus*, recognized as the principal natural reservoir of the virus[1,3].

Human-to-human transmission has been consistently documented in these outbreaks, mainly associated with close contact with infected patients and exposure to bodily fluids and respiratory secretions in both household and healthcare settings [3,4]. This secondary transmission has substantially contributed to outbreak amplification and public health impact, with case-fatality rates ranging from 40% to 75%, as observed in recent episodes in the state of Kerala, India [4].

Although no autochthonous cases of NiV infection have been reported in Latin America to date, recent experience with other public health emergencies has demonstrated the vulnerability of South America to the introduction of emerging pathogens capable of sustained human-to-human transmission. In Colombia, this issue should be approached from a preventive perspective, considering its high biodiversity and the presence of numerous bat species, many of them frugivorous members of the family *Phyllostomidae*, widely distributed across forested, rural, and peri-urban environments and globally recognized as

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reservoirs of diverse zoonotic viruses [3,5]. Although bats of the genus *Pteropus* the primary reservoirs of NiV are not present in the Americas, the region's high chiropteran diversity, coupled with ecosystem disruption, deforestation, agricultural expansion, illegal mining, illicit crop cultivation, wildlife trafficking, and increasing interactions among wildlife, domestic animals, and humans, underscores the need to strengthen epidemiological and virological surveillance [5].

Finally, increasing global human mobility constitutes an additional factor to consider. In recent years, Colombia has experienced sustained growth in international travel for labor, academic, commercial, and tourism purposes, including exchanges with regions of South Asia where NiV circulates recurrently. Experience with respiratory viruses, such as influenza A and SARS-CoV-2, has demonstrated that even moderate levels of mobility can facilitate the early introduction of pathogens with interpersonal transmission. In this context, the ability of NiV to spread between humans, combined with prolonged incubation periods and nonspecific early symptoms, underscores the need to maintain robust clinical and epidemiological surveillance systems integrated under a One Health framework, thereby strengthening the preparedness of the Colombian health system in the face of emerging threats[1,3,5].

Author contributions

BRO is responsible for the conception, drafting, and critical revision of the document.

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Ethical considerations

This work was prepared with academic rigor, adhering to principles of transparency, accuracy, and respect in scientific discussion. All information presented is based on verifiable evidence and was developed without compromising the ethical integrity of scientific communication.

Conflict of interest

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References

1. World Health Organization**.** Nipah virus. Fact sheet [Internet]. Geneva: WHO; 2021. Available from: https://www.who.int/news-room/fact-sheets/detail/nipah-virus

2. Chua KB. Nipah virus outbreak in Malaysia and Singapore, 1998–1999. J Clin Virol. 2003; 26(3): 265–275. doi: https://doi.org/10.1016/S1386-6532(02)00268-8

3. Veggalam S, Jayashankar CA, Balaji O, Thipani Madhu M, Hyder M, Shraddha H, et al. Nipah virus: epidemiology, transmission dynamics, and pandemic potential. Cureus. 2025; 17: e92420. https://doi.org/10.7759/cureus.92420

4. Arunkumar G, Chandni R, Mourya DT, Singh SK, Sadanandan R, Sudan P, et al. Nipah virus disease outbreak in Kerala, India. Lancet Infect Dis. 2019; 219(12): 1867–878. https://doi.org/10.1093/infdis/jiy612

5. Branda F, Ceccarelli G, Giovanetti M, Albanese M, Binetti E, Ciccozzi M, et al. Nipah Virus: A Zoonotic Threat Re-Emerging in the Wake of Global Public Health Challenges. Microorganisms. 2025; 13(1): 124. doi: https://doi.org/10.3390/microorganisms13010124