

Review Article on Nipah Virus

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Abstract: *An developing zoonotic disease with a high case fatality rate is the Nipah virus (NiV). From the natural reservoir host (bats), the infection is transferred to humans via intermediate animals like pigs or through foods tainted with bat saliva or urine. There is currently no cure or vaccine for the illness. Therefore, it's crucial to spot outbreaks early and take personal safety precautions to stop the spread of the disease.*

Keywords: Nipah, Virus

REFERENCES

- [1]. Kulkarni DD, Tosh C, Venkatesh G, Senthil Kumar D. Nipah virus infection: current scenario. Indian J Virol. 2013 Dec;24(3):398–408.
- [2]. Tan KS, Tan CT, Goh KJ. 1999. Epidemiological aspects of Nipahvirus Infection. Neurol J South East Asia 4:77– 81.
- [3]. Centers for disease control and prevention Outbreak of Hendra-like virus-Malaysia and Singapore, 1998–1999 MMWR Morb Mortal Wkly Rep, 48 (1999), pp.265–269.
- [4]. Halpin, K., Hyatt, A. D., Fogarty, R., Middleton, D., Bingham, J., & Epstein, J. H. (2011). Pteropid bats are Confirmed as the reservoir hosts of henipaviruses: A comprehensive experimental study of virus transmissiion. American Journal of Tropical Medicine and Hygiene, 85, 946–951.
- [6]. WHO | Nipah virus infection [Internet]. World Health Organizations. 2018 [cited 2018 May 27].
- [7]. Nipah Virus Case Study [Internet]. Nipah Virus Case Study | One Health Network South East Asia. [cited 2018 May 27].
- [8]. Parashar UD, Sunn LM, Ong F, Mounts AW, Arif MT, Ksiazek TG, et al. Case-control study of risk factors for human infection with a new zoonotic paramyxovirus, Nipah virus, during A 1998-1999 outbreak of severe encephalitis in Malaysia. J Infect Dis. 2000 May;181(5):1755–9.
- [9]. WHO, Nipah virus outbreaks in the WHO South-East Asia Region [Internet]. World Health Organization. World Health Organization; 2017 [cited 2018 May 27].
- [10]. Mounts AW, Kaur H, Parashar UD, Ksiazek TG, Cannon D, Arokiasamy JT, Anderson LJ, Lye MS. 2001. A cohort study of health care workers to Assess nosocomial transmissible of Nipah virus, Malaysia, 1999. J Infect Dis 183:810-813. <https://doi.org/10.1086/318822>.
- [11]. Luby SP, Gurley ES, Hossain MJ. 2009. Transmission of human infection With Nipah virus. Clin Infect Dis 49:1743–1748. <https://doi.org/10.1086/647951>.
- [12]. Gurley ES, Montgomery JM, Hossain MJ, Bell M, Azad AK, Islam MR, MollaMA, Carroll DS, Ksiazek TG, Rota PA, Lowe L, Comer JA, Rollin P, Czub M, Grolla A, Feldmann H, Luby SP, Woodward JL, Breiman RF. 2007. Person To-person transmission of Nipah virus in a Bangladeshi community. Emerg Infect Dis 13:1031–1037. <https://doi.org/10.3201/eid1307.061>.
- [13]. Halpin K, Hyatt AD, Fogarty R, et al. Pteropid bats are confirmed as the reservoir hosts of henipaviruses: a comprehensive experimental study of virus transmission. The American journal of tropical medicine and hygiene. 2011;85:946–951. [PMC free article] [PubMed] [Google Scholar].
- [14]. Middleton DJ, Morrissy CJ, van der Heide BM, et al. Experimental Nipah virus infection in pteropid bats (Pteropus poliocephalus). J Comp Pathol. 2007;136:266–272. [PubMed] [Google Scholar].
- [15]. Wang LF, Mackenzie JS, Broder CC. 2013. Henipaviruses, p 286 –313. In Knipe DM, Howley PM (ed), Fields virology, 6th ed. Lippincott Williams & Wilkins, Philadelphia, PA.

- [16]. Negrete OA, Wolf MC, Aguilar HC, Enterlein S, Wang W, Muhlberger E, SuSV, Bertolotti-Ciarlet A, Flick R, Lee B. 2006. Two key residues in ephrinB3 are critical for its use as an alternative receptor for Nipah virus. *PLoS Pathog* 2:e7. <https://doi.org/10.1371/journal.ppat.0020007>.
- [17]. Bonaparte MI, Dimitrov AS, Bossart KN, Crameri G, Mungall BA, Bishop KA, Choudhry V, Dimitrov DS, Wang LF, Eaton BT, Broder CC. 2005. Ephrin-B2 ligand is a functional receptor for Hendra virus and Nipah virus. *Proc Natl Acad Sci USA* 102:10652–10657. <https://doi.org/10.1073/pnas.0504887102>.
- [18]. Ochani, R. K., Batra, S., Shaikh, A., & Asad, A. (2019). Nipah virus—the rising epidemic: A review. *Le Infezioni in Medicina*, 27(2), 117–127.
- [19]. Epstein, J. H., Rahman, S., Zambriski, J., Halpin, K., Meehan, G., Jamaluddin, A. A., et al. (2006). Feral cats and risk for Nipah virus transmission. *Emerg Infect Dis.*, 12, 1178–1179.
- [20]. Paton, N. I., et al. (1999). Outbreak of Nipah-virus infection among abattoir workers in Singapore. *The Lancet.*, 354, 1253–1256.
- [21]. K.E.Lee, T.Umapathi, C.B.Tan, H.T.Tjia, T.S.Chua, H.M.Oh, et al. (1999) The neurological manifestations of Nipah virus encephalitis, a novel paramyxovirus. *Ann Neurol*, 46, 428–432.
- [22]. Epstein, J. H., Rahman, S., Zambriski, J., Halpin, K., Meehan, G., Jamaluddin, A. A., et al. (2006). Feral cats and risk for Nipah virus transmission. *Emerg Infect Dis.*, 12, 1178–1179.
- [23]. Chua, K. B., Bellini, W. J., Rota, P. A., Harcourt, B. H., Tamin, A., Lam, S. K., et al. (2000). Nipah virus: A recently emergent deadly paramyxovirus. *Science.*, 288, 1432–1435.
- [24]. Islam MMZ, Rahman MM. Nipah virus infection: A fatal emerging disease. *Northern International Medical College Journal*. 2016;7(2):146.
- [25]. Hossain MJ, Gurley ES, Montgomery JM, Bell M, Carroll DS, Hsu VP, et al. Clinical presentation of Nipah virus infection in Bangladesh. *Clin Infect Dis*. 2008 Apr 1;46(7):977–84.
- [26]. Kulkarni DD, Tosh C, Venkatesh G, Senthil Kumar D. Nipah virus infection: current scenario. *Indian J Virol*. 2013 Dec;24(3):398–408.
- [27]. World Health Organization. Emergencies preparedness, response. Nipah virus—India. 2018. <http://www.who.int/csr/don/07-august-2018-nipah-virus-india/en/>. Accessed August 10, 2018.
- [28]. Bellini WJ, Rota P, Parashar UD. Zoonotic paramyxoviruses. In: Richman DD, Whitley RJ, Hayden FG, eds. *Clinical Virology*. 2nd ed. Washington, DC: ASM Press; 2002:845–855.
- [29]. World Health Organization. Emergencies preparedness, response. Nipah virus—India. 2018.
- [30]. <http://www.who.int/csr/don/07-august-2018-nipah-virus-india/en/>. Accessed August 10, 2018.
- [31]. Hsu VP. Nipah and Hendra viruses. In: Tabor E, ed. *Perspectives in Medical Virology. Emerging Viruses in Human Populations*. Volume 16. Netherlands: Elsevier Science Publisher; 2006:179–199.
- [32]. M G. Nipah Virus. *Tropical Medicine & Surgery*. OMICS International. 2013 Jun 20;1(4):1–8.
- [33]. Siddique AB, Fardows J, Farhana N, Mazumder M. Nipah Virus: A Public Health Concern. *Journal of Enam Medical College*. 2016;6(2):101.