

NIPAH VIRUS FACTS

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EPIDEMIOLOGY

- Outbreaks in Malaysia were attributed to infected pigs, while in Bangladesh they were attributed to bats.¹
- The first recognized outbreak occurred in 1998 in Malaysia, with subsequent outbreaks of genetically distinct strains occurring in both India and Bangladesh in 2001; cases are now reported annually in these areas.¹
- More than 600 cases have been reported in Malaysia, Singapore, India, and Bangladesh, with reported case fatality rates as high as 100% in some outbreaks.²
 - From 2001 to 2012, there were 280 cases and 211 deaths in 16 separate outbreaks, mostly in Bangladesh. This is an average CFR of 75%.²
- Cases of human-to-human transmission were seen during outbreaks in Bangladesh and India.¹
- The current estimate of reproductive number (.48) is based on analysis of outbreaks in Bangladesh from 2001 to 2007.³ However, this is assuming that all those infected by a primary case–patient were identified. The estimated reproductive number should be seen as a minimum. Further analysis of all outbreak data is needed to evaluate any change in the estimated reproductive number.
- One study estimated that a third of survivors have permanent neurological deficits.³
- 51% of recognized cases in Bangladesh are believed to be due to human-to-human transmission.¹
 - Respiratory disease was more common and more severe in Bangladesh.
 - Could possibly be a new strain.
- One study stated, “if a strain with an $R_0 > 1$ spills over, or if a strain infecting a person develops an $R_0 > 1$, then in our globally connected world, humanity could face its most devastating pandemic.”³

COMMON SYMPTOMS⁴

- Fever, headache, drowsiness, disorientation and mental confusion, and encephalitis.
- Incubation period of 5-14 days.



DIAGNOSIS⁵

- For early detection, the CDC recommends conducting real-time polymerase chain reaction on clinical samples (ie, nasal swabs, urine, blood, CSF fluid).
- Additionally, identification can be accomplished using antibody detection by ELISA (IgG and IgM).
- In fatal cases, “immunohistochemistry on tissues collected during autopsy may be the only way to confirm a diagnosis.”

TREATMENT⁶

- The CDC reports that “treatment is limited to supportive care.”
- The clinical effectiveness of Ribavirin as a treatment option has been inconclusive.
- Studies using monoclonal antibodies to target the Nipah G-glycoproteins in ferrets have shown promising results.

REFERENCES

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