

Short Communication

Nipah Virus and Semen: The Cautionary Tale for Transmission

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The dwindling control over microorganisms that were previously more manageable, is progressively surfacing in various regions of the world. Considering this, the possibility of transmitting infections among individuals, some in unconventional ways, such as sexual transmission through semen, is concerning.

The recent pandemic caused by SARS-CoV-2 exhibited transient adverse effects on semen quality, thus raising concerns regarding the consequences of Nipah virus infection on semen quality and the plausibility of transmission through this body fluid. The recent resurgence of Nipah virus infection, especially in different regions of Asia, compels us to look for its association with semen.

The Nipah virus RNA was reported to be present in the semen on days 16 and 26 after the onset of symptoms of infection, while there was early clearance of the virus in the blood and urine (on day 9).¹ This is not devoid of logic, as there are examples of virus persistence in semen, allowing us to postulate that semen is and will be an efficient mode of transmission for microorganisms:

For instance, as depicted in Figure 1, semen samples yielded positive results for various viruses over different durations: Ebola virus after 565 days after recovery,² Chikungunya virus at 56 days post-illness onset,³ Zika virus detectable in semen samples for up to 93 days following symptom onset,⁴ Dengue virus tested positive 37 days after the onset of dengue symptoms,⁵ Chapare virus was isolated from semen 86 days post-symptom onset,⁶ Monkeypox virus was detected in semen 19 days after symptom onset,⁷ and Toscana virus was found in semen 59 days after the appearance of symptoms⁸.

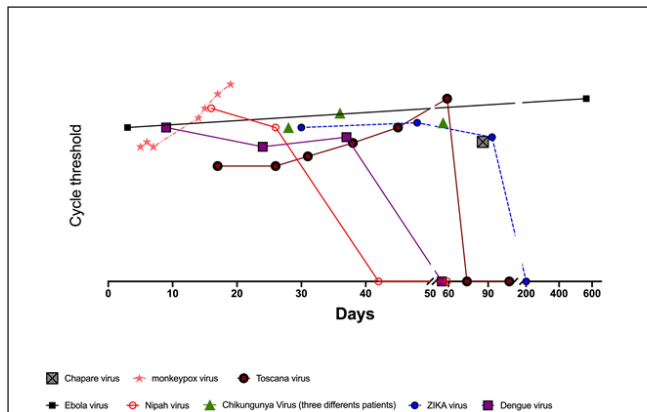


Figure 1. Viral Retention in Semen

The detection of these viruses, even the Nipah virus, does not necessarily indicate their infectiousness and the possibility that these viruses may find their way into the testicular microenvironment to evade the immune response cannot be ruled out.

Additionally, the plausibility of viral replication within the testes raises concerns about potential sexual transmission, which further underscores the importance of developing protective measures and transmission prevention strategies to contain the spread of the virus.

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