

New and deadly viruses passed through sweet food and domestic animals

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Nipah virus is a new and deadly brain and lung disease that emerged from Singapore and Malaysia ten years ago. It is now spreading into rural India and Bangladesh killing up to three-quarters of the people who become infected in some outbreaks, scientists heard today at the Society for General Microbiology's 162nd meeting being held this week at the Edinburgh International Conference Centre.

“People are catching this disease by drinking date palm juice or probably by eating fruit contaminated by the virus, or through contact with infected animals. We have seen nine outbreaks in Bangladesh since 2001, which killed 40-100% of the people who were infected”, says Dr Jahangir Hossain, a scientist working in the Dhaka Hospital at the International Centre for Diarrheal Disease Research in Bangladesh (ICDDR,B).

Fruit bats are a natural reservoir of Nipah virus, and the first outbreaks in Singapore and Malaysia started when pigs on farms ate fruit which had been bitten by infected bats and dropped near their pens. The pigs developed coughs and breathing difficulties, and an epidemic spread across the Asian peninsula due to the pig trade. Pig farmers and abattoir workers became infected from sick pigs.

“Three outbreaks in Bangladesh were caused when people ate fresh date palm sap, a local sweet delicacy, which had been contaminated by bats.” says Dr Jahangir Hossain. “Because both people and animals in Bangladesh often eat fresh date palm sap and fruits which have been

bitten by bats, contaminated food and domestic animals form an important transmission pathway for Nipah virus to infect people”.

The researchers have been trying to discover the way Nipah virus outbreaks start and to identify the factors which could help prevent virus transmission in the future. The large outbreak in pigs in Malaysia and Singapore caused the biggest outbreak in humans so far. In one outbreak in Bangladesh, people became infected after contact with sick cows, and close contact with pig herds was associated with virus transmission in another outbreak.

“We are working with local date palm sap collectors to learn about traditional practices that prevent bats from getting at and contaminating the sap”, says Dr Jahangir Hossain. “If we can identify the factors that allow the virus to be passed from bats to humans so frequently, we might be able to help intervene and interfere with the transmission pathways. Current efforts should focus on restricting the consumption of fruit bitten by bats, restricting human contact with sick animals, and protecting date palm sap from contamination by bat secretions”.

Source: Society for General Microbiology

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