

EXPLAINED

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Serosurveys revealed that shrews might be a reservoir of the Langya virus. File photo: Special Arrangement

The story so far: A new zoonotic virus that has evolved to infect humans was [identified in China](#) in August. On August 4, the *New England Journal of Medicine (NEJM)* [described the virus called Langya \(LayV\)](#), reported in patients in Eastern China.

In a letter published in *NEJM*, a team of researchers from China and Singapore led by Xiao-Ai Zhang, Hao Li, et al say: “In our study, a newly identified henipavirus of probable animal origin was associated with febrile illness, a finding that warrants further investigation to better understand associated human illness.”

The pathogen belongs to the henipavirus family, closely associated with [Nipah](#) and Hendra viruses, and was noticed to cause fever, and respiratory symptoms among 35 people in China since 2018. It was discovered during routine sentinel surveillance of patients who had fever and reported a recent history of exposure to animals in eastern China. It was identified as a phylogenetically distinct henipavirus, indicating its evolution, after being identified in a throat swab sample from a patient. The virus was named after the town this patient lived in — Langya in the Shandong province in China.

Subsequent investigations identified 35 patients with acute LayV infection in the Shandong and Henan provinces of China, the communique explains. In all except nine patients, LayV was the only pathogen isolated, indicating no other infection was present that could have caused the symptoms.

The common symptoms were fever, fatigue, cough, anorexia, myalgia, nausea, headache, and vomiting, accompanied by thrombocytopenia or low platelet count, and leukopenia or a low white blood cell count. In some cases, doctors also noticed impaired liver and kidney functions.

To determine the source or animal origin of the infection, since the patients, mostly farmers, revealed close exposure to animals before they fell sick, scientists drew blood from farm animals and small animals. These serosurveys in animals revealed that shrews, a rat like rodent, might be a reservoir of the LayV.

The *NEJM* letter says that contact tracing of nine patients with 15 close-contact family members revealed no close-contact LayV transmission, but acknowledges that the sample size was too small to effectively determine the status of human-to-human transmission for LayV. So while concluding, with the available evidence, that the virus must have been directed transmitted by shrews or any other intermediary animal (goats, dogs, for instance, that tested positive for LayV in the sero-study), researchers called for further studies to examine all angles thoroughly.

An article in *Nature* quotes evolutionary virologist Edward Holmes, at the University of Sydney, Australia on the way ahead. He says that there is no particular need to worry about this, but constant surveillance would be critical. In general, regularly testing humans and animals for emerging viruses is critical to understand the risk of zoonotic diseases, he adds. The need for surveillance cannot be over stated, certainly not since the COVID-19 pandemic upended the world without warning.

The *Central News Agency*, a government-controlled news outfit in Taiwan, quoted Chuang Jen-hsiang, deputy director of Taiwan's Centers for Disease Control saying they would soon establish a standardised procedure for domestic laboratories to conduct genome sequencing and strengthen surveillance of LayV.

While LayV as we know it now does not pose a huge threat, it is apparent that the nature of a connected world facilitates the easy transmission of viruses globally. While scientific research and pharmacology development have gotten a boost in the arm in the two years since the pandemic, prevention continues to be infinitely better than cure. Constant, unflagging surveillance, and adequate sharing of information between nations is essential, experts underscore.

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