

New virus identified in blood supply

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Scientists have discovered a new virus that can be transmitted through the blood supply. Currently, it is unclear whether the virus is harmful or not, but it is related to hepatitis C virus (HCV) and human pegivirus (HPgV), the latter of which was formerly known as hepatitis G virus. The new virus, which researchers have named human hepegivirus-1 (HHpgV-1), is described in the September 22 issue of *mBio*, an online open-access journal of the American Society for Microbiology.

"HHpgV-1 is unique because it shares genetic similarity with both highly pathogenic HCV and the apparently non-pathogenic HPgV. People need to be aware of this new infection in humans," said lead author Amit Kapoor, PhD, assistant professor, Department of Pathology and Cell Biology, Center for Infection and Immunity, College of Physicians and Surgeons of Columbia University, New York City.

In the new study, researchers performed high-throughput sequencing on blood samples from 46 [individuals](#) in the Transfusion-Transmitted Viruses Study, collected between July 1974 and June 1980. They analyzed samples both pre- and post-transfusion and along with a variety of known viruses, they identified a [new virus](#) in two individuals. The [virus](#) was only present in post-transfusion samples, and additional tests showed that both patients were able to clear the virus. Genetic analysis determined that the virus was related to HCV and HPgV. Genomic testing of 70 additional individuals in the TTVS study failed to detect further cases of the virus.

The researchers also performed high-throughput sequencing on samples

from 106 individuals in the Multicenter Hemophilia Cohort Study who received plasma-derived clotting factor concentrates. They identified the new virus in two individuals, one of whom had persistent long-term infection (5.4 years).

"We just don't know how many viruses are transmitted through the [blood supply](#). There are so many viruses out there, and they need to be characterized in order to ensure that transfusions are safe," said Dr. Kapoor. He said the next steps are to determine the prevalence of the virus and whether it causes disease. If it causes disease, then screening the donor blood supply for the virus will be appropriate.

"Ultimately, once we know more about this, we will look for the presence of this virus in people with certain diseases," said Dr. Kapoor. "The unusually high infection prevalence of HCV, HBV, and HIV in hemophilia patients and other transfusion recipients could have been prevented by earlier identification of these viruses and development of accurate diagnostic assays."

More information: "Virome Capture Sequencing Enables Sensitive Viral Diagnosis and Comprehensive Virome Analysis." [DOI: 10.1128/mBio.01491-15](#)

Provided by American Society for Microbiology

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