

Two case series describe acute pediatric hepatitis of unknown cause

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Cases of acute hepatitis without known cause have been described in

children in two case series published online July 13 in the *New England Journal of Medicine*.

L. Helena Gutierrez Sanchez, M.D., from the University of Alabama at Birmingham, and colleagues identified 15 children (younger than 18 years) with hepatitis admitted between Oct. 1, 2021, and Feb. 28, 2022: six with an identified cause and nine without a known cause. Eight of the [patients](#) without a known cause tested positive for human adenovirus and were included in the case series together with an additional patient referred for follow-up. The researchers found that in six children, [liver biopsies](#) indicated mild-to-moderate active hepatitis, but no evidence of human adenovirus was seen on immunohistochemical examination or electron microscopy. Three children had positive polymerase chain reaction testing of liver tissue for human adenovirus. On sequencing of specimens from five children, three distinct human adenovirus type 41 hexon variants were identified.

Chayarani Kelgeri, M.D., from the Birmingham Women's and Children's NHS Foundation Trust in the United Kingdom, and colleagues conducted a [retrospective study](#) involving 44 children aged 10 years or younger with confirmed acute hepatitis that was not hepatitis A through E and did not have a metabolic, inherited or genetic, congenital, or mechanical cause. The researchers found that common presenting features included jaundice, vomiting, and diarrhea (93, 54, and 32 percent, respectively). Ninety percent of the 30 patients who underwent molecular testing for human adenovirus were positive. Six patients (14 percent) developed fulminant liver failure, and all underwent [liver transplant](#). None of the patients died, and all were discharged home.

"No one wants to hear of a potential new virus of concern in the world these days," writes the author of an accompanying editorial. "However, it is not at all clear that this adenoviral strain is new, of increasing incidence, or causative of acute hepatitis and pediatric liver failure, since

such data have not been prospectively collected in [children](#)."

Several authors from the Sanchez study and one author from the Kelgeri study disclosed ties to the biopharmaceutical and medical device industries.

More information: L. Helena Gutierrez Sanchez et al, A Case Series of Children with Acute Hepatitis and Human Adenovirus Infection, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMoa2206294](https://doi.org/10.1056/NEJMoa2206294)

Chayarani Kelgeri et al, Clinical Spectrum of Children with Acute Hepatitis of Unknown Cause, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMoa2206704](https://doi.org/10.1056/NEJMoa2206704)

Saul J. Karpen, Acute Hepatitis in Children in 2022—Human Adenovirus 41?, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMe2208409](https://doi.org/10.1056/NEJMe2208409)

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