NT HEALTH

Public Health Unit - Centre for Disease Control
Ground Floor, Block 4 Royal Darwin Hospital
Rocklands Drive, Tiwi NT 0810

Postal address
GPO Box 40596
Casuarina, NT, 0811

ECDCSurveillance.DARWIN@nt.gov.au

T 08 8922 8044

File reference
EDOC2022/0295115

27th June 2022

Dear Colleagues,

Health alert: Paediatric hepatitis of unknown aetiology

- An increase in cases of acute, severe hepatitis of unknown aetiology has been reported in children 16 years and under in many countries. Most cases have been in children under 5 years
- Between 5 April and 26 May 2022, there have been 650 probable cases reported from 33 countries.
- There has not been evidence of increased incidence of unexplained paediatric hepatitis in Australia.
- Common infectious causes, viral hepatitis A, B, C, D and E have not been detected.
- It is suggested human adenovirus may be a causative pathogen, having been found in a high proportion of cases.
- Hepatitis, 'not otherwise specified' is a notifiable condition to be reported in the NT.

Multi-country concern
Most cases of paediatric hepatitis of unknown aetiology have been reported in the European region, with a third of cases from the United Kingdom (Great Britain and Northern Ireland) alone. A further third of all probable cases have been reported in the United States of America, with the remainder reported in the Western Pacific, South East Asian and Eastern Mediterranean regions. While limited, epidemiological linkages have occurred among a few reported cases in Scotland and the Netherlands.

There have been 9 deaths reported and 38 children have required liver transplants. Compared with previous cases of paediatric hepatitis of unknown aetiology, these cases are more clinically severe and more likely to lead to acute liver failure.

Pathogenic causes are being investigated, with the most plausible being adenovirus infection. For cases who were tested for adenovirus, 60.8% tested positive. Co-infection with SARS-CoV-2 and complication of a previous SARS-CoV-2 infection is also being investigated as a factor, although less likely. As most cases were not vaccinated against SARS-COV-2 virus, disease relating to vaccine side effects is not supported.

Paediatric Active Enhanced Surveillance (PAEDS) and OzFoodNet in Australia are working with the Commonwealth Government and jurisdictional public health units to monitor any suspected cases. A retrospective review conducted by PAEDS did not identify any signals to suggest cases are occurring at unusual frequency in Australia and prospectively, the most useful case finding will be clinician notification.

Reference: World Health Organisation. 2022. Acute hepatitis of unknown aetiology in children – Multi-country. Available at: www.who.int/emergencies/disease-outbreak-news/item/DON-389

Symptoms and investigation
Cases generally present with gastrointestinal symptoms including abdominal pain, diarrhoea and vomiting, followed by jaundice and elevated liver enzymes. Symptoms of hepatitis may also include fever, fatigue, dark urine, pale stools and joint pain. Early investigation of suspected cases of hepatitis is important – children presenting with jaundice following gastroenteritis should receive the following tests:

- Liver function tests
- Adenovirus PCR (whole blood, stool and respiratory tract samples)
- Serology for Hepatitis A, B, C, D, E; cytomegalovirus (CMV); Epstein-Barr virus (EBV), parvovirus, SARS-CoV-2
- Autoimmune markers
- SARS-COV-2 PCR (respiratory tract sample)

If cases of paediatric hepatitis of unknown aetiology are suspected, please contact a Paediatrician or Paediatric Infectious Disease Specialist.

Hepatitis, 'not otherwise specified' is a notifiable condition to be reported in the NT

Recommendations

- Clinicians who suspect hepatitis should implement standard contact and droplet precautions. Hospitalised children should ideally be in their own room with ensuite.
- Children with acute hepatitis should not return to school or childcare until one week after the onset of jaundice and symptoms have resolved.
- Children with gastroenteritis should not attend school or childcare until 48 hours after their symptoms have resolved.
- Promotion of good hygiene practices is urged.

Health Alerts are now available on the NT Health website. Please contact your regional Centre for Disease Control for further advice.

Thank-you for your attention to new cases of acute hepatitis in children.

Yours sincerely,

Dr Vicki Krause
Director
Centre for Disease Control and Environmental Health

Dr Joshua Francis
Paediatric Infectious Diseases Specialist
Royal Darwin Hospital

Centre for Disease Control	Darwin	Katherine	Nhulunbuy	Tennant Creek	Alice Springs
Phone	08 89228044	08 89870357	08 89739049	08 89517540	08 89624259
Fax	08 89228310	08 89870500	08 89739048	08 89517900	08 89624420