Acute hepatitis of unknown aetiology in children: laboratory testing strategy guidance and epidemiological updates

In this webinar we had an update on the epidemiological situation, update of reported cases of acute hepatitis of unknown aetiology in children, discussed enhanced surveillance efforts in several countries, investigation studies and the key recommendations from the WHO interim guidance on laboratory testing.

Dr Andreas Hoefer described the dose collaboration between ECDC and WHO in setting up a surveillance system for acute hepatitis cases, and provided a summary of the reported cases in Europe, noting that there appears to be a decrease over the last couple of weeks. Dr Hoefer mentioned the heterogeneity across countries regarding adenovirus typing results, and initial results obtained via metagenomics. He shared recommendations from the ECDC guidance for diagnostic testing, priorities for microbiological investigation and next steps moving forward with investigating suspect acute hepatitis cases.

Dr Lara Vojnov provided an overview of the timeline on WHO and partner activities, communications and information products released, and case notifications to date, highlighting that the majority of cases come from the European and American regions. Key recommendations from the interim testing guidance included priority specimen and collection timing; regional or global support if testing capacity is limited and suggested investigative diagnostics. Dr Vojnov ended by explaining ongoing response priorities such as partner coordination, development of commercial assay lists and regional reference laboratories to enable wider access to testing.

Dr Angela Alarcón Cruz described the national acute hepatitis diagnostic algorithm, sent to all health professionals in Colombia, and the development of a national strategy for surveillance of acute hepatitis by the National Institute of Health (NIH). Health facilities were advised about the specimen type and collection requirements for analysis, as well as consideration of other pathogens and toxins. Laboratory confirmation is performed at NIH. Ten suspect cases were notified, of which two were classified as probable. Dr Cruz described the laboratory investigations performed, including metagenomics, and identification of Human mastadenovirus F40.

Dr Adriana Torres described how a national technical group for case investigation was quickly formed in Costa Rica in response to the initial alert from WHO. Guidelines including case definitions, specimens to be collected and epidemiological investigation guidance were developed, advising laboratories to perform a minimum set of tests for case investigation and providing information for referral to other laboratories. Of eight suspect cases of acute hepatitis, three could be classified as probable cases.

Prof Maria Zambon provided an overview of the confirmed and possible cases of acute hepatitis in the UK, and shared information on ongoing investigations and test algorithms. In terms of laboratory testing, adenovirus was the most frequently detected pathogen, and preliminary results seem to indicate no association between SARS-CoV-2 infection and acute hepatitis of unknown origin, however further investigations are needed. Prof Zambon mentioned the work being performed in the UK to improve test performance through clinical laboratories, given the wide variety of commercial tests being used, and highlighted on a final note that there is no current indication of a novel adenovirus variant linking hepatitis cases, with further investigations underway.

Useful links (click on blue text)

- Webinar recordings: AR, EN – FR – RU – PT – SP
- Dr Adriana Torres talk: AR, EN – FR – RU – PT – SP
- Presentations: Dr Andreas Hoefer – Prof Maria Zambon – Dr Lara Vojnov – Dr Ángela Alarcón Cruz (SP, EN*) – Dr Adriana Torres (SP, EN*)
- Questions answered by the presenters: EN
- WHO guidance documents: Laboratory testing for severe acute hepatitis of unknown aetiology in children: interim guidance
- Access materials from previous webinars: PHLabs

1Dr Adriana Torres’s talk took place offline, a separate recording is available in the useful links blue box above.
2The interpretation of proceedings serves to facilitate communication and does not constitute an authentic verbatim record of the proceedings. Only the original speech is authentic.