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Viral Hepatitis Prevention Board

Introduction to the Healthcare System of Slovakia with Focus on Viral Hepatitis

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Regional Meeting

PRAGUE, CZECH REPUBLIC

29-30 October 2024

Viral Hepatitis

- Is a global health problem

Challenges faced today are:

- reaching the risk populations
- access to screening and effective treatment
- reinfections
- coinfections or superinfections (HBV-HDV, HBV-HCV, HBV-HEV, HBV-HEV)
- *gazette of the Ministry of Health from 2021 standard procedure for acute hepatitis*

Competences

- infectology, or hepatology, gastroenterology who participate in the differential diagnostic procedure and patient treatment
- Doctors specializing in general medicine for adults, general medicine for children and adolescents, tropical medicine
- The nurse with other members of the multidisciplinary team
- worker of the department of epidemiology is looking for contacts

Diagnosics / Procedure for determining the diagnosis

- **1. Suspicion of acute hepatitis**

with a typical clinical picture, search for epidemiological connections

- **2. Laboratory confirmation of acute hepatitis**

(AST and ALT), de Ritis coefficient

- **3. Determination of the type of acute viral hepatitis**

serological examinations, anti-HAV IgM, HBsAg, anti-HCV, anti-HEV IgM

Differential diagnosis

Laboratory diagnosis of viral hepatitis A-E

- a) first suspicion of VH,
- b) accidental detection of the given liver disease,
- c) positivity during the screening examination of blood donors,
- d) searching for carriers of hepatitis B (HBV) and C (HCV) viruses in risk groups of the population exposed to this infection,
- e) performing differential diagnosis of liver damage,
- f) examining patients with viral hepatitis B (VHB) and C (VHC) before starting antiviral treatment,
- g) monitoring the progress and effectiveness of the implemented treatment,
- h) Investigating healthy contacts during outbreaks of viral hepatitis,
- i) performing an immunological screening

Treatment

- the treatment of acute viral hepatitis is only symptomatic
- Hospitalization
- enterally transmitted hepatitis A and E require a separate room and toilet
- Antivirals
- Patients with fulminant liver failure

*Opinion of
experts
(assessment
activity,
revision
activity)*

- From the assessment point of view, acute viral hepatitis causes temporary incapacity for work for a duration according to the severity of the clinical picture
- According to Annex no. 4 to Act No. 461/2003 Coll. on social insurance as amended, chronic forms of viral hepatitis can cause disability with a rate of decrease in the ability to perform gainful activity of over 40% depending on the severity of the clinical picture with an impact on the overall performance of the organism

Organization of care

- The care of patients with acute viral hepatitis falls under the competence of the Department of Infectology and Tropical Medicine
- First-contact doctors - pediatricians and general practitioners
- differential diagnosis of typical symptoms, which are dyspeptic complaints, increased temperature, fatigue, sometimes with jaundice, at least a basic laboratory examination (bilirubin, AST, ALT, GMT ALP, CRP)
- Doctors specializing in the specialized field of general medicine and doctors specializing in the specialized field of pediatrics also participate in preventive vaccination against viral hepatitis
- Field workers of the department of epidemiology are looking for patient contacts

Other recommendations

- Acute viral hepatitis is one of the diseases that must be reported to the relevant Regional Office of Public Health
- epidemiologists will then ensure appropriate anti-epidemic measures to prevent the spread of the disease
- For acute hepatitis A and B, post-exposure vaccination is also recommended for close contacts

***A network of
laboratory
workplaces
performing
laboratory
diagnostics of
VH A-E***

1) The basic laboratory examinations necessary to ensure the laboratory diagnosis of VH A-E are carried out by:

- a) microbiological laboratories of medical facilities
- b) laboratory sections of the transfusion service (for blood donors)

2) Additional, highly specialized test for confirmation:

- a) National Reference Center for VH,
- b) specialized workplaces for viral hepatitis at the Office of Public Health of the Slovak Republic in Bratislava or the Regional Offices of Public Health
- c) other professional specialized workplaces that meet the conditions of accreditation of the methods used and external (international) quality control

Data 2022 (NCZI)

- In 2022, **572 cases** of all types of viral hepatitis (VH) were reported, which is an increase of 43.2% compared to 2021
- the CHC had the highest proportion of the total number of diseases: 55.2%
- 5-fold increase, but with a still low incidence of the diagnosis of hepatitis A (VHA), namely 62 cases vs. 12 in 2021
- 179 cases (31.3%) occurred in acute form and 393 cases (68.7%) in chronic form, VHC dominated among chronic forms – 316 cases
- A decrease in incidence was not recorded for any diagnosis described in this group of infections
- In acute VHB, the incidence was increased more than twice, in other diagnoses there was also an increase, with a maximum in acute VHC (by 44%), but especially chronic by 83%. The character of the imported infection was 32 VH infections: VHA (8), acute VHC (1), VHE (4), chronic VHB (5) and chronic VHC (14)

*Statistics at
the NRC for the
years 2022,
2023 and 2024
until 23th
October 2024*

Examinations 2022	Number	Positive
Anti-HAV IgM	16	12
Anti-HAV tot.	1	1
HAV RNA	4	3
HBsAg konf.	331	167
Anti-HBc tot.	755	316
Anti-HBs tot.	8	6
Anti-HBe tot.	5	3
HBV DNA	97	11
Anti-HCV konf.	846	243
HCV RNA	123	53
Anti-HDV	34	0
Anti-HEV IgG	237	22
Anti-HEV IgM	72	1
HEV RNA	25	0

Examinations 2023	Number	Positive
Anti-HAV IgM	41	19
Anti-HAV tot.	5	3
HAV RNA	3	0
HBsAg konf.	357	169
Anti-HBc tot.	755	316
Anti-HBs tot.	4	1
HBeAg	5	0
Anti-HBe tot.	5	1
HBV DNA	172	5
Anti-HCV konf.	1008	330
HCV RNA	142	38
Anti-HDV	126	1
Anti-HEV IgG	105	10
Anti-HEV IgM	115	9
HEV RNA	34	12

Examinations 2024	Number	Positive (23.10.24)
Anti-HAV IgM	33	16
Anti-HAV tot.	7	2
HAV RNA	14	4
HBsAg konf.	380	190
Anti-HBc tot.	685	297
Anti-HBs tot.	7	4
Anti-HBe tot.	23	12
HBV DNA	176	15
Anti-HCV konf.	896	425
HCV RNA	154	51
Anti-HDV	107	7
Anti-HEV IgG	30	13
Anti-HEV IgM	43	20
HEV RNA	154	76
HDV RNA	2	2

Activities of the NRC for viral hepatitis in Bratislava

- Confirmatory examinations of patient sera
- Performing molecular (qPCR) and hybridization methods (ELISA)
- Consultations of questionable cases
- Comparison and optimization of diagnostic methods and kits
- Application of modern procedures of molecular and hybridization methods
- Pedagogical activity

- HEV RNA testing in blood donors
- HCV RNA genotypes
- Isolations from stool, from amniotic fluid
- HDV RNA PCR
- Double reflex testing

I would like to thank

my colleagues who work with me for their support in laboratory diagnostics:

- **Jakub Mihale, MSc. PhD student**
- **Jana Bako, MSc.**
- **Lubica Sedlikova**

And for support and advice to Head of the Institute of Microbiology now the Institute of Laboratory Medicine

- **Prof. Shubhada Bopegamage, MSc., PhD**

Thank you for your attention!