PROJECT PRAKASH
KEY LEARNING POINTS

Training: Hepatitis Induction Program
Topic: Viral Hepatitis A & E
Faculty: Dr. Reshu Agarwal, Associate Professor, Clinical Virology, ILBS
Period: 2021 -2022
Attendees: In-Service Nurses

Viral Hepatitis means inflammation (swelled or enlarged) of liver due to hepatitis viruses.

Overview of HAV & HEV

	HAV	HEV
Family	Picornaviridae	Hepeviridae
Nucleic Acid	ssRNA	ssRNA
Routes of transmission	• Feco-oral, • Contaminated water, • Food-borne illness- shellfish (molluscs- oysters, etc.)	Fecal-oral via infected pig meat, infected water
Age at presentation of AVH	Common cause of AVH in first decade of life; ≤10 - 15 yrs.	Older adolescents/adults; ≥ 20 - 50 yrs.
Chronic	No	No Yes – for HEV genotype 3
Oncogenic potential (HCC)	No	No
Vaccine	Yes	Yes, in China only
Sero-prevalence (IgG)	Anti-HAV IgG: • ubiquitous (≈ 100%) by age 10-15 yrs. • in developing countries • **protective into later life**	Anti-HEV IgG: • 20-40% in adults • low (5-10%) before age 15 yrs. • **Non-protective**
Incubation Period	10 – 45 days	10 – 45 days

Clinical spectrum of HAV

- Subclinical (asymptomatic) infection
- Acute viral hepatitis
- Fulminant hepatitis (rare)
- Acute on chronic liver failure

Clinical spectrum of HEV

- Acute Viral Hepatitis
- Acute-on-chronic liver failure
- Fulminant Hepatic failure in pregnancy
- Chronic Viral Hepatitis E - in the immunocompromised
- Extrahepatic manifestations

Laboratory Diagnosis of HAV & HEV

HAV	HEV
Serology (Antibody detection) • Anti-HAV IgM • Anti-HAV IgG Molecular assays • RT-PCR for HAV RNA (stool, blood) Electron Microscopy (stool) • Virions ≈27 nm	Serology (Antibody detection) Anti-HEV IgM Anti-HEV IgG Antigen detection - HEV Ag Molecular assays • RT-PCR for HAV RNA (stool, blood) Immune Electron Microscopy (IEM)

Chronic HEV

- HEV RNA-positive serum or stools for ≥3 months
- No report till date in developing countries (India)
- Increasingly reported in developed countries with HEV genotype 3 infection
- Risk population
  - Solid organ transplant patients on immunosuppressive treatment
  - HIV infected patients
  - Patients with haematological malignancies

- Management
  - Reduction in immunosuppression in high risk population
  - Anti-viral therapy – Pegylated interferon & Ribavirin monotherapy.

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