

PROJECT PRAKASH

KEY LEARNING POINTS

Training: Hepatitis Induction Program

Topic: Viral Hepatitis B, C, & D

Faculty: Ms. Tarika Sharma, Lecturer, CON, ILBS

Period: 2021 -2022

Attendees: In-Service Nurses

Viral Hepatitis means inflammation (swelling or enlargement) of liver due to viruses.

Viral Hepatitis B, C & D are blood borne viruses.

Classification of HBV, HCV & HDV

	HBV	HCV	HDV
Family	Hepadnaviridae	Flaviviridae	Delta agent (satellite virus)
Nucleic Acid	dsDNA	ssRNA	ssRNA
Routes of transmission	Parenteral- infectious blood or body fluids	Parenteral - infected needles & unsafe injections	Parenteral - Requires HBV replication for its multiplication
Chronic	Yes; high risk of cirrhosis & HCC	Yes; high risk of cirrhosis & HCC	Yes, leads to severe course of liver disease
Oncogenic potential (HCC)	Yes	Yes	-
Vaccine	Yes	No	HBV vaccine is protective for HDV also
Incubation Period	75 days (30 – 180 days)	2 weeks – 6 months	Occurs as a super or co-infection to HBV

Laboratory Diagnosis of HBV, HCV & HDV

HBV	HCV	HDV
Liver function tests Serological markers <ul style="list-style-type: none"> • HBcAg • HBsAg • HBeAg • Anti-HBs • Anti-Hbe • Anti-HBc • IgM anti-HBc • IgG anti-HBc HBV DNA	<ul style="list-style-type: none"> • Liver function tests • Anti HCV • HCV-RNA Testing • Genotyping • Liver biopsy No marker to distinguish between acute and chronic infections	<ul style="list-style-type: none"> • PCR • IgG anti-HDV • IgM anti-HDV.

Treatment of HBV, HCV & HDV

HBV	HCV	HDV
<p>Acute Infection</p> <ul style="list-style-type: none"> No specific Treatment Treatment is supportive <p>Chronic Infection</p> <ul style="list-style-type: none"> Oral antiviral agents - Tenofovir or Entecavir Continues life-long Routine follow up Prevent liver damage & HCC 	<ul style="list-style-type: none"> Hepatitis C is curable. Effective Direct acting antivirals (DAAs). Three pan-genotypic regimens approved by WHO. Sofosbuvir, Daclatasvir, Velpatasvir, Ribavirin are used Treatment duration: 12-24 weeks. 	<p>Acute Infection</p> <ul style="list-style-type: none"> Supportive care is given <p>Chronic Infection</p> <ul style="list-style-type: none"> High-dose interferon alfa (IFN-α) with or without Tenofovir may be used.

Prevention of HBV, HCV & HDV

HBV	HCV	HDV
<ul style="list-style-type: none"> Hepatitis B vaccine Maternal screening for HBsAg Safe sexual practices Do not share needles Universal precautions for HCWs 	<ul style="list-style-type: none"> Follow Universal precautions Safe injections & safe blood 	<ul style="list-style-type: none"> HBV-HDV Co-infection Pre or post exposure prophylaxis to prevent HBV infection HBV-HDV Super-infection Education to reduce risk behaviours among persons with chronic HBV infection

Nursing Management

- Patient Education
 - Explain importance of adherence, monitoring and follow up.
 - Limit or avoid alcohol and quit smoking
 - Intake of healthy diet
 - Mental well-being and physical exercise
- Family Screening & Counselling
 - Ensure sexual partner(s), household members, and drug use partner(s) are tested and immunized/vaccinated.
 - Inform: risk for transmission to sex partners. Use Barrier protection.
 - Avoid sharing personal items such as toothbrushes or razors.
 - Donating blood, organs, tissue, or semen can spread HBV to others.
- In-patient Management
 - Regular blood tests to check the function of the liver.
 - Keep all appointments.**

- Monitoring of Complications
 - For Cirrhosis, Liver Failure & HCC.
