PROJECT PRAKASH
KEY LEARNING POINTS

Training: Hepatitis Induction Program
Topic: Prevention & Management of Viral Hepatitis
Faculty: Dr. Sapna Chauhan, Program Co-ordinator, ILBS
Period: 2018 – 2020
Attendees: In-service Nurses

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

Prevention of Viral Hepatitis

HAV	HBV	HCV	HDV	HEV
Ensure: Safe drinking water, good personal hygiene, proper sewage disposal, and vaccine Killed and live attenuated hepatitis A vaccines - IAP recommends two doses 6 months apart after 1 year of age	**Hepatitis B vaccine: effective - NFHS-4: 66.3% coverage for all 3 doses** Maternal screening for HBsAg Safe sex Do not share needles Universal precautions for HCWs	**Follow Universal precautions** Safe injections & safe blood	**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	Safe water and sanitation Health education Personal hygiene Vaccine not yet approved in India

Recommended Dose of Hepatitis B Vaccine

Age Group	Recombivax HB Dose (mcg)	Engerix-B Dose (mcg)
<11 years of age	0.5 ml (5)	0.5 ml (10)
Adolescents 11-19 years	0.5 ml (5)	0.5 ml (10)
Adults ≥ 20 years	1.0 ml (10)	1.0 ml (20)

Routine Infant Vaccine Schedule of Hepatitis B

Dose+	Usual Age	Minimum interval
Primary 1	**Birth**	**--**
Primary 2	1-2 months	4 weeks
Primary 3	6-18 month*	8 weeks**

Routine Adult Vaccine Schedule of Hepatitis B – 3 dose vaccine series

Dose+	Minimum interval
Dose 1	**Now**
Dose 2	1 month after 1st dose
Dose 3	6 months after 1st dose

Treatment & Management of Viral Hepatitis

HAV	HBV	HCV	HDV	HEV
Is a self-limiting infection No specific treatment Focus on supportive care Aim is at maintaining comfort and adequate nutrition	**Acute:** treatment is supportive **Chronic patients:** Regular follow up prevent liver damage & HCC Guidelines for treatment **Key points:** ✓ HBV is a lifelong, dynamic disease ✓ Reactivation can occur even in those who have lost HBsAg ✓ Drugs can reduce liver decompensation and fibrosis progression ✓ The primary treatment goal is: **to prevent progression** of the disease, particularly to cirrhosis, liver failure, or hepatocellular carcinoma (HCC). **<u>HBV can be controlled but not cured!!</u>**	Hepatitis C is curable Effective Direct acting antivirals (DAAs) Genotype based treatment regimens Three pan-genotypic regimens approved by WHO Treatment duration: 12-24 weeks	**Acute –** No treatment **Chronic –** Peg Interferon + Adefovir Tenofovir (HBV-HDV-HIV co-infected)	**Acute -** No specific treatment for acute hepatitis E infection It is regarded as a self-limiting disease. Patients recover completely within four weeks Only supportive management needed **Chronic -** If the patient is pregnant or have a pre-existing liver condition, refer to a specialist urgently. Severe cases may need **RBV** therapy **Chronic Hepatitis E** seen in immuno-suppressed patients- may lead to Cirrhosis. RBV and Peg IFN for CHE Rx

Direct Acting Anti Virals Therapy for HBV & HCV

HBV	HCV
Indications of therapy in Chronic HBV infection: Based mainly on the combination of three criteria: • **Serum HBV DNA levels … Normal Value?** • **Serum ALT levels – (7-56 units)** • **Severity of liver disease** • Rx also considers age, health status, family history of HCC or cirrhosis and extra hepatic manifestations. Tenofovir/Entacavir are the drug of choice. The induction of sustained or maintained virological remission (sustained off therapy HBsAg loss/ maintained undetectable HBVDNA)	Direct acting antivirals (DAA) for HCV infection – a major breakthrough in T/t of Hep C: Use SOFOSBUVIR + VELPATASVIR = Easy to treat patients - 12 weeks. **Difficult patients –** • Optimize response – Add RBV, Extended treatment • NS5A failure – Individualize, (retreatment/New). • Decompensated Cirrhosis – SOF + VEL + R X 12/24 wks. • Transplant candidates (LDLT) – Treat post-transplant. Monitor- reactivation, de-novo hepatocellular carcinoma, recurrence

Pregnant Women & Viral Hepatitis

Pregnancy & HBV	Pregnancy & HCV
• Counsel HBsAg-positive female who are pregnant to reduce the risk of mother-to-child transmission. • Pregnant women need to be assessed before their third trimester to see if treatment is indicated. • Infants born to HBV-positive women require PEP including HBIg and HBV vaccine to reduce the risk of mother-to-child transmission	• Approximately **6 of every 100 infants** born to HCV-infected mothers • **Transmission occurs at the time of birth:** no prophylaxis • Treatment during pregnancy is not recommended due to the lack of safety and efficacy data. • Most infants infected **at birth have no symptoms** • **Breastfeeding** and HCV infection • Children born to HCV-infected mothers should be tested for anti-HCV **no sooner than age 18 months** • For women of reproductive age with known HCV infection, antiviral therapy is recommended before considering pregnancy, to reduce the risk of HCV transmission to future offspring. • Treatment during pregnancy is not recommended due to the lack of safety and efficacy data.

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