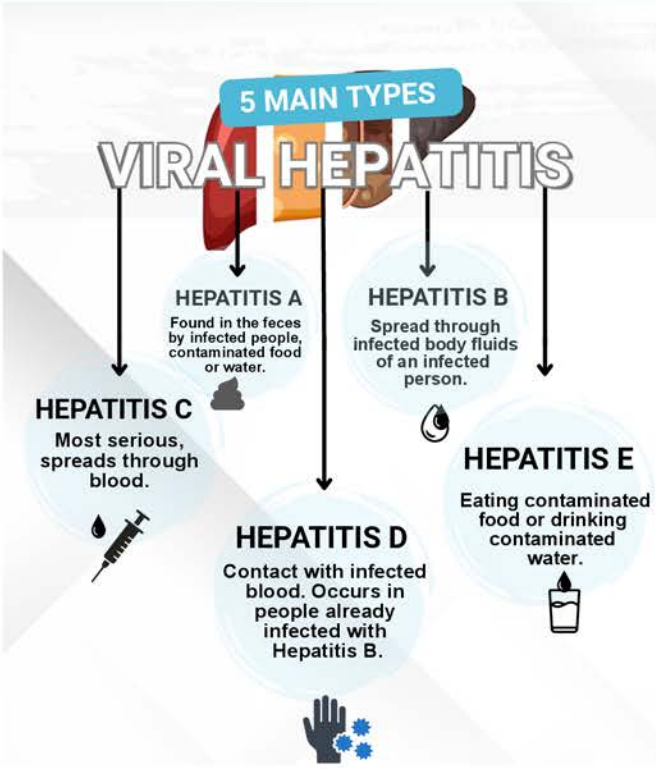
KNOWING YOUR STATUS IS THE FIRST STEP TO STOP LIVER CANCER

NEWSLETTER

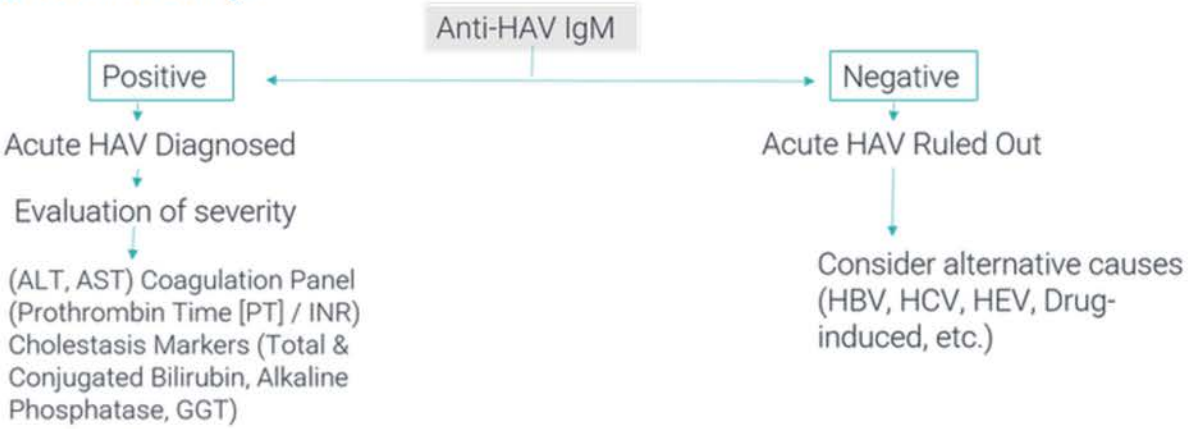
Most people with viral hepatitis do not realize they are infected until the condition has progressed to advanced stages. Early detection is vital in preventing liver cancer. Viral hepatitis refers to inflammation of the liver caused by a viral infection.

- 304 million people were living with chronic HBV & HCV
- 2.2 million people were newly diagnosed with chronic HBV & HCV
- 6 000 people per day
- 1.3 million people died of chronic HBV & HCV
- 3 500 deaths per day; this is on par with Tuberculosis
- Hepatitis B is preventable with a vaccine.
- All babies should receive the HBV vaccine as soon as possible after birth (within 24 hours).
- Chronic HBV and HCV can silently lead to liver damage or cancer, even though they are preventable and treatable.



HEPATITIS A (DIAGNOSTICS STEPS)

When acute Hepatitis A is suspected, it's essential to order the Hepatitis A Antibody Panel for screening.The diagnosis relies on differentiating between an acute infection and previous immunity.



- Anti-HAV IgG or Total Anti-HAV (Positive) + Anti-HAV IgM (Negative): Indicates past exposure or vaccination.
- The patient is immune and does not have an active infection.

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REFERENCES:

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ACUTE HEPATITIS A

- **Spontaneous Recovery**: Hepatitis A is always acute and self-limiting. The infection typically resolves completely within 2 to 6 months without chronicity.
- **Lifelong Immunity**: After recovery, the body develops lifelong immunity to **Hepatitis A,** protecting against future infections.
- **No Risk of Chronicity:** Unlike **hepatitis B and C, hepatitis A** does not become chronic and does not lead to long-term liver damage, cirrhosis, or liver cancer

ACUTE HEPATITIS B

- Acute hepatitis is referred to in the first 6 months after the patient is infected.
- **Spontaneous Recovery:** Over **90% of adults** with acute HBV infection recover spontaneously, clearing the virus completely and gaining lifelong immunity.
- **Severe Forms**: Rarely (about 1 in 1,000 cases), acute HBV can progress to fulminant hepatitis, a life-threatening condition without prompt medical intervention. A liver transplant may be necessary.

CHRONIC HEPATITIS B

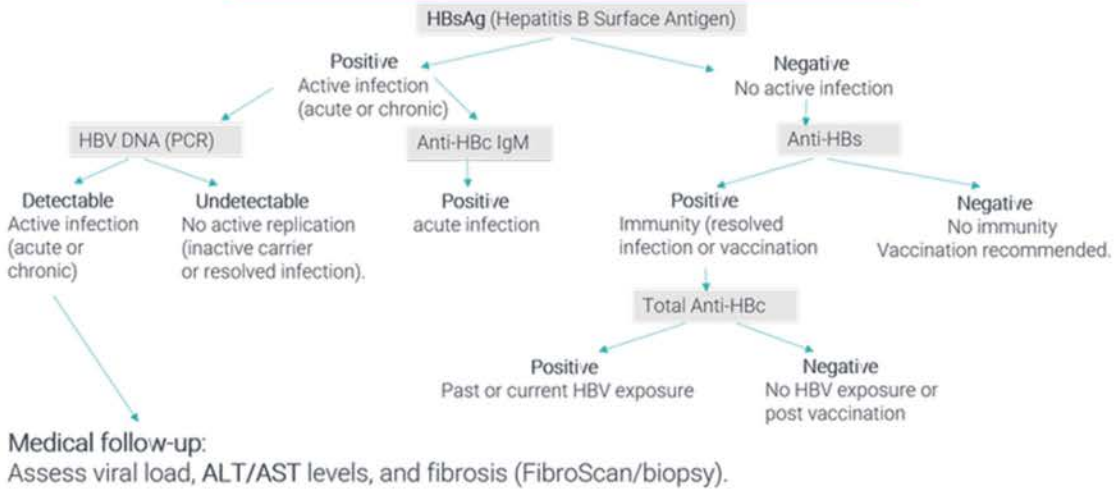
Understanding the Long-Term Effects
Chronic hepatitis occurs when the virus remains in the body for more than six months following exposure. The progression to a chronic state affects approximately 2% to 10% of individuals infected with HBV. The risk of developing chronic hepatitis B is significantly higher in younger individuals; for instance, a newborn infected with the virus faces a 90% chance of developing chronic hepatitis B, whereas the risk drops to less than 10% for a healthy adult.

SYMPTOMS

- Fatigue of varying degrees that may be associated with depression,
- Skin damage: purpura, itching, dry skin, etc.
- Dry mouth and eyes: dry syndrome.
- Joint and muscle pain.
- Vascularity.
- Thyroid involvement.
- The symptoms are not related to the severity of the infection.

The Hepatitis B virus is highly contagious, 100 times more contagious than HIV. It can withstand **up to 7 days in the** ambient environment & infect an individual if necessary.

HBV SEROLOGICAL DIAGNOSTIC ALGORITHM



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Hepatitis B and Pregnancy

- In utero contamination of Hepatitis B is uncommon.
- The primary risk of transmission arises during delivery for mothers who are HBV positive. The infant may become infected through contact with micro-lesions (blood) or vaginal secretions.
- In 90% of cases, the infant may develop chronic hepatitis, with the likelihood increasing as the individual is younger.
- Transmission can also occur through blood, sexual contact, and, though less frequently, from mother to child during pregnancy.

PREVENTION

The vaccine is advised for infants, young children, and individuals at high risk of HBV exposure, while it is mandatory for healthcare personnel.

Vaccine Effectiveness

- The effectiveness of the vaccine is evaluated through the anti-HBs antibody test. (A result greater than 10 IU/L is deemed protective.)

DID YOU KNOW?

The virus is detectable 30 to 60 days after infection.

Vaccination is the most effective prevention against HBV.

- **Those Who Bleed Blood:** Hepatitis, a liver disease, disrupts various biological parameters. The following indicators can help assess the progression of the infection:
- **Liver and Gallbladder Enzymes:** Levels of transaminases (TGO, TGP), gamma-GT, alkaline phosphatase**s (ALPs)**, and bilirubin tend to increase during an infection.
- **Prothrombin Level (PT)**: This measures the time it takes for blood to clot. In cases of hepatitis, this time is often prolonged.
- **Complete Blood Count (CBC):** Hepatitis can result in a decreased platelet count, and the level of leukocytes (white blood cells) may also be affected.Caution: These biological parameters can be altered due to reasons other than HBV infection. Therefore, serology is crucial to confirm or rule out a diagnosis of hepatitis B.
- The treatment of chronic infection in the case of hepatitis B is based on two drugs**: Interferon,** which stimulates immune defences, and an antiviral that blocks the multiplication of the virus.The interest of the treatment is twofold: to eradicate the virus if possible and to improve the condition of the liver.

Serology is based on the detection of antibodies or specific antigens for HBV. There are 3 main antigen-antibody pairs sought:

- HBsAg / Anti-HBs antibodies,
- HBc Ag / Anti-HBc Ag
- HBe Ag / Anti-HBe antibodies.

Anti-HBS antibodies appear 2 to 6 months after the start of infection and persist for several months to several years in the blood.

The presence of anti-HB antibodies can result from: Of a cure. Post-vaccination protection against HBV. Anti-HB antibodies are considered protective for a titer greater than or equal to 10 IU/l.

The HBs antigen indicates the presence of HBV. The persistence of HBsAg beyond 6 months characterizes chronic hepatitis B. In the event of superinfection with the Hepatitis D virus, the antigen may be transiently undetectable.

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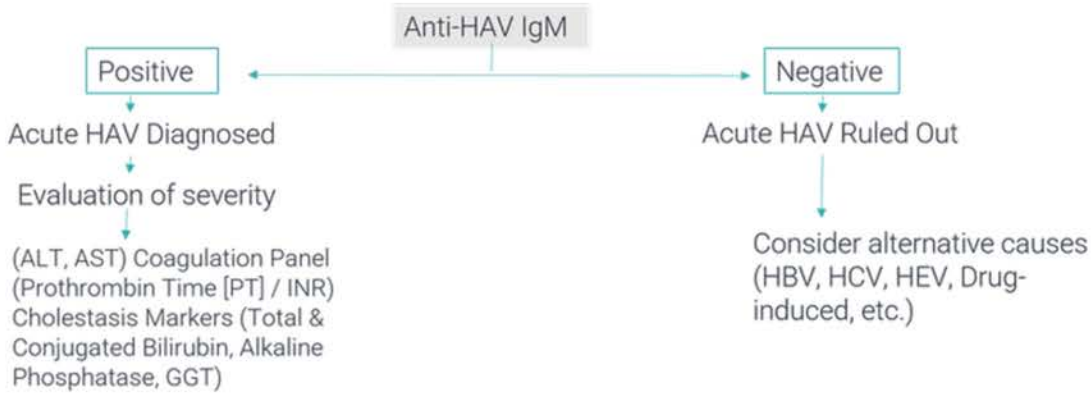
HEPATITIS C (DIAGNOSTICS STEPS)



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- The patient is immune and does not have an active infection.

HEPATITIS C (DIAGNOSTICS STEPS)

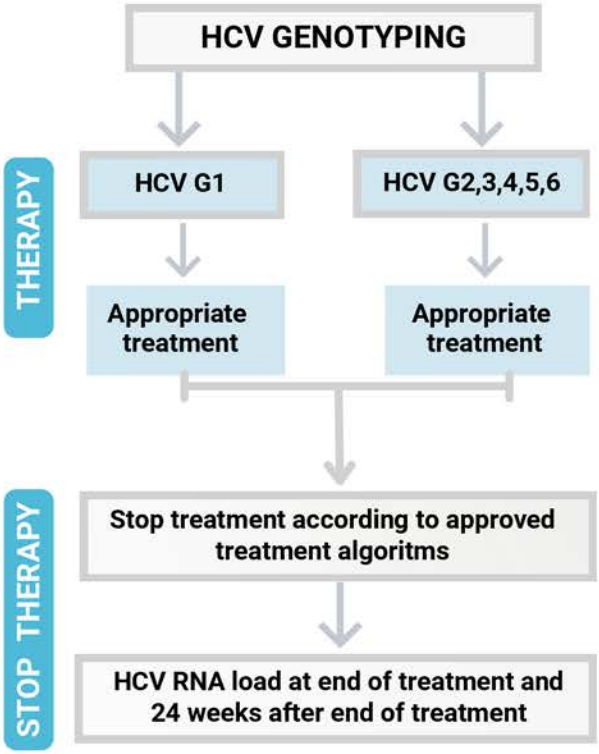
- Screening for anti-HCV antibodies identifies individuals who have been exposed to HCV.
- Confirmation of chronic infection in sero-positive individuals is achieved by detecting HCV RNA.
- Evaluation of the extent of liver damage is performed.
- Genotyping HCV aids in guiding treatment decisions and managing the disease.
- Monitoring of viral load is essential to track treatment progress.

TRANSMISSION

- Sharing injection equipment or misusing medical devices.
- Receiving transfusions of unscreened blood products.
- Engaging in sexual contact or transmission from mother to child.
- It's essential to remember that HCV is NOT transmitted through breast milk, food, water, kissing, or sharing food and beverages with an infected person.

VIRAL LOAD & GENOTYPING

- In response to the growing demand for high-quality, affordable HCV diagnostics, we have **implemented analyses of HCV genotype and viral load.**
- The **HCV Genotype assay** identifies genotypes 1, 2, 3, 4, 5, and 6, along with subtypes 1a and 1b, using just 0.5 mL of human serum or plasma, with a lower detection limit of 500 IU/mL.
- For **the HCV RNA load assay**, 900 µL of plasma from EDTA blood is utilized to accurately measure HCV levels within a range of 12 to 100 million IU/mL. HCV can still be detected outside of this range.
- The manufacturer has established the lower limit of detection with a 95% probability between 4.4 and 11.0 IU/mL. Therefore, a test result indicating **"NOT DETECTED"** does not necessarily mean that HCV is absent in the patient.



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