Perioperative management of Hepatitis B patient

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Hepatitis B

Hepatitis B virus (HBV) infection remains to be a major public health burden. Approximately 240 million people worldwide are chronically infected with HBV, which contributes to about 30% of

cirrhosis cases and 45% of hepatocellular carcinoma (HCC) cases.

Hepatitis B is caused by infection with the HBV, with an incubation period that can span 6 weeks to 6 months.

Increased concentrations of the HBV are found in blood, with lower concentrations in other body fluids such as wound exudate, semen,

vaginal fluid, and saliva.

Hepatitis B

Hepatitis B infections are more stable in the environment than other blood-borne pathogens (HIV, hepatitis C virus), and, as such, they are more infectious.

The primary risk factors associated with infection among adolescents and adults are unprotected sex with an infected partner, multiple partners, MSM, history of other STDs, and IDU.

Hepatitis B

HBV infections can be self-limited or chronic. If present, symptoms of acute HBV infection can include constitutional symptoms such as fever, fatigue, and loss of appetite.

Gastrointestinal symptoms such as abdominal pain, jaundice, nausea, and vomiting may be present. Discoloration of stool and urine may also be noted.

The risk for developing chronic HBV infections is inversely related to the age of acquisition, with 90% of infected infants developing chronic HBV infections verses 2% to 6% of infected adults. The risk for premature death from cirrhosis or HCC is 15% to 25% among those with chronic HBV.

Diagnosis

- The diagnosis of HBV infection requires serologic testing. Serologic testing allows for differentiation among those susceptible to HBV infections, those with either resolved HBV infection or vaccineinduced immunity, and those with either acute or chronic HBV infection.

SEROLOGIC TEST	SUSCEPTIBLE	IMMUNE DUE TO NATURAL INFECTION	IMMUNE DUE TO HBV VACCINE	ACUTELY INFECTED	CHRONICALLY INFECTED	UNCLEAR
HBsAg	Negative	Negative	Negative	Positive	Positive	Negative
Anti-HBc	Negative	Positive	Negative	Positive	Positive	Positive
Anti-HBs	Negative	Positive	Positive	Positive	Negative	Negative
IgM anti-HBc				Positive	Negative	

Counseling Patients Who Are HBsAg Positive

- Have household and sexual contacts vaccinated
- Use barrier protection during sexual intercourse if partner is not vaccinated or naturally immune
- Do not share toothbrush or razors
- Do not share injection equipment/glucose testing equipment
- Clean open cuts and scratches
- Clean blood spills with bleach solution
- Do not donate blood, organs, or sperm

- The CDC recommends screening of all pregnant women for HBsAg and HBV DNA testing for women who are HBsAg positive.
- If HBV DNA is greater than 200,000 IU/mL, antiviral treatment is suggested to decrease the perinatal transmission risk.

Vaccination

The CDC recommends HBV vaccination for the following:

- Prophylaxis for infants born to HBsAG-positive women (also include hepatitis B immunoglobulin [HBIG])
- Universal vaccination of all infants beginning at birth as a safeguard for infants born to HBV-infected mothers not identified prenatally.
- Routine vaccination of all previously unvaccinated children younger than 19 years of age

Vaccination

- Vaccination of adults at risk for HBV infection, including those requesting protection from HBV without acknowledgment of a specific risk factor Both single-antigen HepB vaccines and combination vaccines are available.

Postvaccination Serologic Testing for Response

Postvaccination serologic testing for response is generally not indicated.

Testing is recommended for those in whom knowledge of their immune status is needed (e.g., HCWs or public safety workers at high risk for continuous percutaneous or mucosal exposure to blood/bodily fluids).

It is also recommended for persons with HIV infections and other immunocompromised persons to determine the need for revaccination.

It is also recommended for sex partners and needle-sharing partners of HBsAg-positive persons to determine the need for revaccination and other methods to protect themselves from HBV infection.

Postvaccination Serologic Testing for Response

- Booster doses or revaccination is not recommended unless anti-HBs remains less than 10 mIU/mL, after initial vaccination of infants born to HBsAg-positive mothers, in HCWs, in hemodialysis patients, and in other immunocompromised individuals

Postexposure Prophylaxis

- For those who are exposed to HBV through an identifiable exposure to blood or body fluids, all wounds and skin sites that have come into contact with potentially infected fluids should be washed with soap and water.
- Mucous membranes should be flushed with water.
- Applying caustic agents (e.g., bleach) or injection of antiseptics into the wound is not recommended.

Postexposure in a Previously Vaccinated Health Care Worker

- Recommendations for postexposure in a previously vaccinated HCW are as follows:
- If anti-HBs is known to be greater than 10 mIU/mL, no testing of the source patient for HBV is indicated, and no postexposure prophylaxis is indicated.
- If anti-HBs is unknown, the HCW should be tested for anti-HBs levels, and the source patient should be tested for HBsAg.
- If anti-HBs is less than 10 mIU/mL and it is not known if the source patient is HBsAg-positive, the HCW should get one dose of HBIG and be revaccinated with two doses.

Postexposure in a Previously Vaccinated Health Care Worker

- Check anti-HBs 1 to 2 months after the second vaccine dose.
- If anti-HBs is less than 10 mIU/mL and the source patient is HBsAg-negative, the HCW should receive one vaccine dose.
- Check anti-HBs 1 to 2 months after vaccine dose.
- If anti-HBs is greater than 10 mIU/mL, no hepatitis B immunoglobulin (HBIG) or additional vaccine is indicated.

Postexposure in a Previously Vaccinated Health Care Worker

- For vaccinated HCWs with anti-HBs less than 10 mIU/mL after two vaccine series, the source patient should be tested as soon as possible.
- If source patient is positive, two doses of HBIG are indicated, one at the time of exposure and an additional dose 1 month later.
- No additional vaccine is indicated.

Postexposure in an Unvaccinated or Incompletely Vaccinated Health Care Worker

- The source patient should be tested as soon as possible. If the source patient is HBsAg-positive or unknown, the dose regimen is as follows:
- HCW should receive one dose of HBIG and one vaccine dose.
- Complete remainder of vaccine series
- Anti-HBs 1 to 2 months after last vaccine dose (at least 6 months from HBIG dose) If the source patient is HBsAg-negative, the dose regimen is as follows:
- HCW should complete vaccine schedule
- Anti-HBs 1 to 2 months after last vaccine doses

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