Hepatitis B Virus Testing

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INDICATIONS FOR TESTING

Acute onset
- Jaundice
- Viral illness

ORDER

- Hepatitis Panel, Acute with Reflex to HBsAg Confirmation
  (includes the following):
  - Hepatitis A Virus Antibody, IgM
  - Hepatitis B Virus Surface Antigen with Reflex to Confirmation
  - Hepatitis B Virus Core Antibody, IgM
  - Hepatitis C Virus Antibody by CIA

HBV surface antigen + HBV core IgM abs +

Acute HBV
Follow to determine resolution
Repeat test in 4-6 wks

HBV surface antigen + HBV core IgM abs -

Possibly chronic HBV or contamination of specimen
Repeat test 4-6 wks

HBV surface antigen - HBV core IgM abs +

HBV infection probably resolving

Consider other etiologies
- Viral
  - Cytomegalovirus
  - Epstein-Barr virus
  - Herpes simplex virus
  - Varicella-zoster virus
  - Hepatitis A, C, D or E
- Toxin exposure
  - Alcohol
  - Tetrachloride
- Nonalcoholic acute steatohepatitis
- Drug-induced hepatitis
  - Acetaminophen
  - Antiseizure medications
  - Isoniazid (Nydradzil)
  - Oral contraceptives
  - Rifampin (Rifadin)
  - Sulfonamides
- Autoimmune
  - Systemic lupus erythematosus
  - Primary biliary cirrhosis
  - Sclerosing cholangitis
  - Autoimmune hepatitis
- Bacterial
  - Leptospira spp
  - Coxiella burnetii (Q-fever)
  - Rickettsia rickettsii (Rocky Mountain spotted fever)
  - Treponema pallidum (Secondary syphilis)
  - Septis
  - Rickettsia typhi (typhus fever)
- Granulomatous
  - M. tuberculosis
  - Sarcoïdosis
  - Hereditary
  - Wilson disease
  - Hemochromatosis
  - Alpha-1-antitrypsin deficiency
- Ischemia
- Parastis
  - Liver trematodes
  - Toxocara spp

Chronic
Moderately elevated transaminases
(Possible past history of hepatitis)

ORDER

- Hepatitis B Virus Surface Antigen with Reflex to Confirmation
- Hepatitis B Virus Core Antibodies (Total)
- Hepatitis B Virus Surface Antibody
  AND
  Hepatitis C Virus Antibody by CIA

HBV surface antigen + HBV core IgM abs +

HBV positive
See Hepatitis C Virus Testing Algorithm

HBV surface antigen + HBV core IgM abs -

Chronic HBV likely
Repeat test in 4-6 wks
To monitor therapy,
- HBV NAAT, HBeAg, HBsAb, HBeAb
- HBV NAAT

If testing confirms HBV,
consider Hepatitis B Virus Genotype by Sequencing

HBV surface antigen - HBV core IgM abs +

False + anti-HBc or chronic infection
Consider HBV NAAT testing and/or HBV vaccine followed by repeat HBV serology
Repeat test in 4-6 wks
To monitor therapy, use HBV NAAT, HBsAg, HBeAg and HBeAb

HBV surface antigen - HBV core IgM abs -

Recovered from HBV infection

HBV surface antigen - HBV core IgM abs +

Expected serology response from HBV vaccine

Test Key
- HBV NAAT – Hepatitis B Virus (HBV) by Quantitative NAAT
- HBeAg – Hepatitis Be Virus Antigen
- HBeAb – Hepatitis Be Virus Antibody
- HBsAb – Hepatitis B Virus Surface Antibody
- HBsAg – Hepatitis B Virus Surface Antigen with Reflex to Confirmation