



Biological diagnosis of viral hepatitis

Recommendations and References

The diagnosis of acute virus A, B or C hepatitis, according to clinical, epidemiological and age context, rests on detection of anti-HAV IgM, HBs Ag and anti-HBc Igms, and HCV Ab

Virus A Hepatitis

In general the diagnosis of acute Virus A hepatitis is easy, and is based on positivity of anti-HAV IgMs. Tests to detect total anti-HAV Ab are not useful in the diagnosis of acute Virus A hepatitis.

There is no chronic Virus A hepatitis and if there is a chronic rise in transaminases it is not justified to suggest a test to detect anti-HAV Ab.

It is recommended to perform tests for total anti-HAV Ab before vaccinating a patient over 30; it is useless to verify post-vaccinal immunization by means of total anti-HAV Ab if vaccination was correctly done.

Virus B And C Hepatitis

The diagnosis of acute Virus B hepatitis is based on detection of HBs Ag and of anti-HBc Igms. Tests to detect anti-HBc Ag, anti-HBV Ab and Hepatitis B Virus DNA are generally useless to diagnose an acute Virus B hepatitis..

When a chronic viral hepatitis is suspected, in first step HBV Ag and anti-HCV Ab will be tested. If tests are positive, they should be verified

Every time HBV Ag or anti-HCV Ab are detected, the result should be controled on another sample.

The monitoring of virus B or C hepatitis is based on transaminase measures.

For patients suffering from chronic virus B hepatitis or from chronic HBV infection, and not treated, tests to detect serum HBV DNA more than once a year are not useful, except in case of special incident (e.g. new-increase in transaminases or occurrence of signs of reactivation).

In a chronic HBV Ag carrier, tests to detect HBV Ag, anti-HBV Ab and HBV DNA should be performed.

The family of patients suffering for acute or chronic HBV infection should be screened for virus B hepatitis and vaccinated, if they have no infection markers.

HBV Ag tests are part of the systematic assessment offered to all pregnant women, after the sixth month ; it should be desirable to offer it sooner in risk populations. Immunization of the child born to a HBV Ag + mother should be verified by means of a measure of anti-HBs between the month following completion of vaccination protocol and the 15th month of life. A monitoring of the absence of infection (search for Hbs Ag) and of the quality of immunization (measure of anti-HBs Ab) should be performed during the life of the child. Booster doses every 5 to 10 years are recommended.

It is useless to repeat anti-HCV Ab tests to monitor the evolution of virus C chronic hepatitis.

It should be offered to pregnant women, specially among populations with risk of HCV infection, a screening of anti-HCV Ab on the occasion of systematic screening of Hbs Ag. In case of anti-HCV Ab positivity, it seems desirable to perform tests to detect viral replication (HCV RNA).

After the birth of a child to a HCV positive mother, there is no consensual attitude about the child's serologic follow-up. Tests to detect anti-HCV Ab and/or viral RNA are useless at birth and during the first year of life.

Tests to detect anti-HCV Ab may be suggested to patients with a risk factor for virus C hepatitis after tests for transaminase rise.

There is a strong professional agreement to confirm the usefulness of pre-vaccinal serological tests for Hbs Ag and anti-HBc Ab in risk populations that may so be screened, in particular dialysis and immunodepressed patients, nursing staff and people born or having lived in an area of strong endemia.

After vaccination against virus B hepatitis, it is recommended to verify the quality of immunization (anti Hbs Ab measure), 1 to 3 months after the last injection and yearly in high risk subjects.

Ag = antigen

Ac = antibody

VHA = hepatitis A virus

VHB = hepatitis B virus

VHC = hepatitis C virus