

### **1.A.2 Chronic viral hepatitis.**

The frequency of hepatitis B virus (HBV) infection seems to have considerably decreased over the last years in our country, as shown by studies in blood donors population (0.6-0.85%)<sup>7,8</sup>. However, there is no exact epidemiological evidence of the disease on the general population of our country. Minority populations (e.g. employment refugees from Albania) have very increased prevalence (up to 25%)<sup>9</sup>. In contrast, small preliminary studies in Greek general population suggest possible prevalence between 2% and 3%, whereas a greater frequency in certain areas (HBV infection enclaves)<sup>10</sup> cannot be ruled out. This fact may explain why 60% of the patients of the Hepatology Medical Center of the Pathology Sector at the University of Thessaly suffer from chronic HBV infection. It should be underlined here that both chronic HBV and hepatitis C virus (HCV) infections are characterized by the lack of symptoms in a very high percentage of the patients even in the case of advanced disease.

The initial serological tests required for the screening of possible HBV infection is the determination of the virus surface antigen (HBsAg) and the antibodies against the HBsAg (anti-HBs) and against the core antigen (anti-HBc). The presence of positive anti-HBs and anti-HBc antibodies suggests immunity to the HBV, which means that the asymptomatic “patient” with the increased aminotransferases should be screened in a different direction. Positive HBsAg and positive anti-HBc antibodies suggest chronic disease. Other tests that may be carried out to establish whether there is virus replication include the determination of the e core antigen (HBeAg) and the antibodies against HBeAg (anti-HBe). However, it should be noted that in our country, alike North Europe and USA, prevails the mutated strain of the HBV which is characterized by the presence of anti-HBe (HBeAg negative chronic hepatitis B) with or without active virus replication. Similarly, a test for possible coinfections with hepatitis delta (detection of anti-HDV antibodies) or HCV virus (detection of anti-HCV antibodies) should be carried out.

“Patients” with positive aforementioned tests (HBsAg, anti-HBc and HBeAg or more often anti-HBe) and increased aminotransferases for a period of 4-6 months should be referred to Hepatitis Centers, after an ultrasound scan of the liver has been made, and then should follow HBV-DNA determination through modern molecular techniques as well as liver biopsy to determine the grade of activity and the grade of the disease fibrosis before beginning any treatment. These “patients” should be vaccinated against hepatitis A virus (HAV), after having been examined for the presence of IgG antibodies against HAV (anti-HAV IgG), since in case of infection with the HAV they manifest severe hepatitis A characterized by increased morbidity and mortality. Finally, they should be examined periodically for suprainfection with the hepatitis delta virus (examination for anti-HDV antibodies).

After detecting the HBV “patient”, SIGNIFICANT effort should be made to exam the whole family of the sufferer (parents, siblings, spouses, children) as over the previous decades, the vertical (from the positive mother to the neonate) and

the domestic (horizontal) transmission of the HBV were the most important ways of transmitting the virus in our country. The recommended examination of the “patient”’s relatives involves determining HBsAg, anti-HBs and anti-HBc. There is no need to isolate the sufferer but to vaccinate the sensitive individuals who live with him or her, and to comply with the minimum sanitary rules (e.g. separate toothbrush, personal razors, nail clippers etc.) so that there is no contact with the “patient”’s blood.

To diagnose hepatitis C, history information of parenteral exposition to the virus (transfusions before 1991, users of intravenous substances, hemodialysis patients, health professions etc.) is important. However, a significant proportion of HCV patients that can be up to 70% has no apparent infection route and source (sporadic or cryptogenic form). The prevalence of HCV infection in our country is approximately 2.5%. The laboratory investigation of possible HCV infection is made through serological tests (detection of anti-HCV antibodies). The method sensitivity ranges from 92% to 97%<sup>11</sup>. Positive trial for anti-HCV (twice) on the asymptomatic “patient” with aminotransferases increase poses a secure diagnosis of chronic hepatitis C.

As in chronic hepatitis C, “patients” with positive anti-HCV antibodies and increased aminotransferases for a period of 4-6 months (or even less, as in chronic hepatitis C there may be intervals with normal aminotransferases, known as the “yo-yo” effect) should be referred after an ultrasound scan of the liver has been made in Hepatology Centers and then should follow HCV-RNA determination and determination of the virus genotype through modern molecular techniques as well as liver biopsy before beginning any treatment. The HCV “patients” should be vaccinated against hepatitis A virus (HAV) and against HBV after having been examined for the presence of anti-HAV IgG and anti-HBs and anti-HBc antibodies, respectively. Contrary to what is stated above for HBV, there is no need to examine thoroughly the “patient”’s relatives for the presence of anti-HCV as the sexual, vertical and domestic spread of the HCV infection is extremely rare.