

Ogneva E., Zhuravlyova A.

## **THE USAGE OF NONINVASIVE DIAGNOSTIC TESTS IN PATIENTS WITH CHRONIC LIVER DISEASES**

Kharkiv National Medical University (Department of internal medicine №3), Ukraine

Liver is one of the most affected organs in diabetes. Diagnosis of diffuse chronic liver diseases, especially on the early stages of progression of histological changes is rather complicated problem. The «gold» standard for diagnosing of histological changes in the liver is liver biopsy. However, this procedure is invasive, has contraindications and this method is not accurate enough. It was the basis for the introduction of noninvasive diagnostics of liver fibrosis into the clinical practice. The main are liver ultrasound, computerized tomography, magnetic resonance imaging and elastometry. Particular attention is paid to the new noninvasive diagnostic tests FibroTest and FibroMax.

**Purpose.** To assess the possibility of usage of noninvasive diagnostic tests FibroTest and FibroMax in patients with chronic liver diseases.

**Results.** Diagnostic tests FibroTest and FibroMax represent the expert system of conversion of the following biochemical blood parameters: alpha -2 macroglobulin, haptoglobin, apolipoprotein A1, gamma-glutamyl transpeptidase (GGT), total bilirubin, alanine aminotransferase (ALT), height (kg), weight (m) for FibroTest and alpha-2 macroglobulin, haptoglobin, apolipoprotein A1, GGT, total bilirubin, ALT, aspartataminotransferase (AST), blood glucose (fasting), triglycerides, total cholesterol, height (kg), weight (m) for FibroMax.

FibroTest includes two calculation algorithms where FibroTest is for diagnostics of the liver fibrosis and AktiTest is for the assessment of necroinflammatory activity. FibroMax includes Fibrotest, AktiTest and also three diagnostic algorithms: SteatoTest is to determine the stage of steatosis, AshTest is to determine the degree of alcoholic steatohepatitis activity and NashTest is to determine the stage of non-alcoholic steatohepatitis (NASH) in patients with metabolic syndrome. As a result we got the indexes that correspond to a certain degree of histological activity, stage of steatosis, fibrosis and severity of NASH in accordance to the most commonly used morphological scales.

In clinical work of our department we use all the methods of noninvasive diagnostics, but for dynamic control of liver condition and for evaluation of treatment effectiveness we prefer FibroTest and FibroMax tests. In controversial cases we use elastometry or biopsy.

**Conclusion.** Do these tests allow to replace liver biopsy? No, they don't. However, in those cases when biopsy cannot be performed or for the dynamic assessment of the treatment we can use the results of these tests.