RESULTS OF NASH-FIBRO TEST IN ARMENIAN PATIENTS WITH MAFLD

Narina C. Sargsyants
Infectious Diseases, National Institute of Health, Yerevan, Armenia

Background & Aims

New definition of hepatic steatosis Metabolic-dysfunction-associated fatty liver disease (MAFLD), previously known as nonalcoholic fatty liver disease (NAFLD), defined in addition the presence of overweight/obesity, type 2 diabetes mellitus (T2DM), or evidence of metabolic dysregulation. It is well-known that ultrasonography can detect hepatic steatosis only when exceeding 15–20%, with a sensitivity ranging between 60–94% and specificity between 88–95%. Although confirmation of the diagnosis of hepatic steatosis can be achieved by imaging methods, they do not provide data on staging the disease (steatohepatitis and fibrosis), which until recently required a liver biopsy for confirmation. The limitations of biopsy and the developing of reliable noninvasive blood tests no longer considered liver biopsy as mandatory screening of liver in MAFLD.

Methods

25 patients with MAFLD were involved in the study (60% male), from 31 to 69 years old (47.2±12.5). Assessment of hepatic steatosis was performed using both hepatic ultrasonography and NASH-FibroTest (BioPredictive). NASH-FibroTest includes 4 non-invasive biomarker panels for for quantitative assessment of steatosis (SteatoTest), necroinflammatory activity and steatohepatitis (ActiTest and NashTest-2) and fibrosis (FibroTest). Besides 10 parameters of NASH-Fibro Test (alpha2-macroglobulin, haptoglobin, apolipo-protein A1, ALT, AST GGT, total bilirubin, serum fasting glucose, triglycerides TG, cholesterol (CHOL) plus age and gender) we adjusted high density lipoprotein (HDL), low density lipoprotein (LDL) and ferritin (FERR).

Results

Average BMI of patients 31.3±5.2 kg/m^2, 44% were overweight and 56% with obesity, 24% with T2DM. Results of Fibrotest F4 had 12% of patients, F3 – 8%, F2 – 4%, F1-2 – 36%; SteatoTest results S3 severe steatosis (>32%) – 16%, S2-3 and S2 significant steatosis (6-32%) – 28% and 8% respectively, S1-2 – 20%; NashTest N3 – 4.2%, N2 – 41.7%. N1 – 37.5%; ActiTest A3 – 4.2%, A2 – 41.7%, A1 – 37.5%. Range and mean ± SD/SE: FERR 26.2-1056.4 (254.4±60.5) ng/mL; GLUC 4.35-13.3 (6.13±1.99); TG 0.69-5.4 (2.19±1.06), HDL 0.64-1.27 (0.97±0.17), LDL 1.55-5.48 (3.38±0.98), CHOL 2.96-6.77 (4.87±0.89) mmol/L, GGT 15-163 (52.3±33.7), ALT 19-168 (51.8±32.7), AST 14-62 (29.9±12.7) U/L. Risk of atherosclerosis 3-33 (18.3±6.1).

Conclusions

In evaluated patients with MAFLD more than half were obese and one fourth with T2DM NASH-FibroTest revealed advanced fibrosis and cirrhosis in 20%, severe and significant steatosis in 44% and severe and moderate steatohepatitis due to metabolic disorders is 46% of patients.