HYPOLIPIDEMIC THERAPY IN PATIENTS WITH METABOLIC SYNDROME AND NONALCOHOLIC FATTY LIVER DISEASE

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Introduction. Metabolic syndrome (MS) and non-alcoholic fatty liver disease (NAFLD) induce significant increase of triglycerides (TG), total cholesterol (TC) and low density lipoproteins (LDL), which is associated with the risk of cardiovascular disease and requires high doses of statins and possibly in combination with fibrates. This combination of drugs can result in a pronounced hepatotoxicity. Therefore, ursodeoxycholic acid (UDCA) was included as a hepatoprotector into the complex treatment of these patients.

Objective: assessment of the dynamics of lipid metabolism: TC, LDL, TG, and alanine aminotransferase (ALT) and aspartate aminotransferase (ASA) in patients with MS and NAFLD association.

Materials and methods: The study involved 48 patients. MS was diagnosed according to the criteria of WHO (1999). The diagnosis of NAFLD was based on present hepatic steatosis, identified by ultrasound study or computed tomography in the absence of alcohol abuse. All the patients underwent general clinical and laboratory investigations. All patients were treated with angiotensin-converting enzyme inhibitor and/or sartan, optionally – metformin.

Depending on the regimen, patients were divided into two groups: group I (n = 26) consisted of patients who additionally took rosuvastatin 20 mg per day, group II (n = 22) included patients who were additionally treated with rosuvastatin 10 mg per day and ursodeoxycholic acid 300 mg per day. Indicators were assessed before and after a month of treatment. Patients were representative by sex, age, disease duration. The control group consisted of 20 healthy individuals.

Results: before the treatment, cholesterol concentration was increased 4.2 times in all patients ($p<0.001$), LDL – 3.2 times increased ($p<0.001$), triglycerides – almost 6 times increased ($p<0.001$), ALAT – 1.5 times increased ($p<0.05$), ACAT – 2.8 times increased ($p<0.001$) as compared with healthy individuals.

After a month's treatment, total cholesterol remained higher than in the healthy, but in the patients of group II it was 1.7 times lower, than in the group I patients ($p_{I-II}<0.05$). LDL levels also remained elevated in both groups in comparison with healthy individuals, but it was 2.3 times lower in the group II patients, than in the patients of group I ($p_{I-II}<0.01$). Triglyceride levels in the patients of group II decreased maximum under the influence of the therapy: almost 3 times decrease, as compared to the pre-treatment indicators ($p<0.001$), and 1.6 times decrease in comparison with group I ($p_{I-II}<0.05$).ALT level of the group II patients did not differ from indicators of healthy individuals and was 1.6 times lower, than in the patients of group I, whose ALT level remained almost equal to the pre-treatment indicator ($p_{I-II}<0.05$). ASA in patients of group II was 1.3 times higher, than in healthy representatives, and group II patients had it 3.1 times higher, as compared with the healthy ($p<0.05$). This can be explained by the hepatotoxic effect of statin use.

Conclusion. The combination of rosuvastatin and UDCA led to significant reduction of the atherogenic dyslipidemia level with lower doses of statin, and reduction of transaminase levels in patients with MS and NAFLD.

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