

PORTAL HEMODYNAMIC STATE IN NONALCOHOLIC FATTY LIVER DISEASE PATIENTS WITH AND WITHOUT HYPERTENSION

Kateryna Lapshyna¹ /Лапшина Катерина, Natalia Chereliyuk² /Наталія Черелюк

¹Department of internal medicine №1, Kharkiv national medical university,

² GI"National Institute of Therapy named after L.T. Malaya National Academy of Medical Sciences of Ukraine"

Nonalcoholic steatohepatitis (NASH) is an inauspicious variant of the nonalcoholic fatty liver disease (NAFLD) development, which is characterized by the liver cells damage, inflammation and, as a rule, the development of fibrosis. The study of fibrogenesis promotes the constant renewal of knowledge about the mechanisms leading to steatohepatitis and affecting stellate cells including inflammatory mediators, cytokine synthesis, autophagy, endoplasmic reticulum stress, oxidative stress, metabolism of retinol and cholesterol, epigenetics and receptor-mediated signals.

Objective: To study portal hemodynamic state in nonalcoholic fatty liver disease (NAFLD) patients with and hypertension (HT) and without it.

Materials and methods: 60 NAFLD patients with hypertension and 30 NAFLD patients were examined, diagnosed by clinical, biochemical, and liver image and 20 healthy individuals, without any liver disease. These groups did not differ in age and gender. Portal hemodynamics state was assessed by ultrasound examination.

Results: The group with combined pathology was shown to have an increase in the diameter of the portal vein on average by 2.3 cm / s and 1.3 cm / s ($p = 0.002$) in patients with combined and isolated pathology, respectively, a reduction in its maximum (by 36.8% and 38.1% ($p = 0.013$)) and minimum (by 4.2% ($p = 0.45$)) blood flow rates in the group with combined pathology, an increase in the diameter of the total hepatic artery by 5.7% and 3.7% ($p = 0.001$) and the resistance index by 1.3 times or more in both groups.

Conclusions: Assessment of portal hemodynamics in patients of the main group and the comparison group showed significant differences in the parameters of the portal vein, namely the maximum and minimum speed of the linear blood flow, as well as its diameter, according to diameter and maximum rate of linear blood flow of the total hepatic artery, and the resistance index. Comorbidity of NAFLD with HT resulted in more severe pathological changes in portal blood flow when compared to isolated course of the disease.