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Relevance of the proinflammatory biomarkers usage in nonalcoholic fatty liver disease patients with hypertension

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Recently nonalcoholic fatty liver disease (NAFLD) received much amount of attention that is primarily due the prevalence of the disease - 10-30% of the general population in developed countries and developing countries. Hypertension is one of the most common diseases in the world - and affects 30-35% of the adult population. Recently, much attention is paid to the combination of these two pathologies. In several works NAFLD connection with hypertension was shown, but this pathology alters the prognosis for these patients, both in terms of the progression of liver failure, and in terms of a significant increase in the frequency of complications of cardiovascular disease.

NAFLD is the most common cause of abnormal results of liver function in adults and children. The histological spectrum of NAFLD covers steatosis, nonalcoholic steatohepatitis (NASH), fibrosis and cirrhosis. Simple steatosis in most cases has a benign clinical prognosis, but NASH is characterized by a progressive course that in 10-15% of cases leads to cirrhosis.

Liver biopsy is the only reliable way of diagnosing and staging NASH but its invasive nature limits its use. Ultrasonography, computed tomography and magnetic resonance imaging are widely used to visualize NAFLD. These are non-invasive methods, but none of them have sufficient sensitivity and specificity to distinguish NASH with steatosis.

Cytokeratin 18 (CK18) has been extensively studied as a biomarker off NASH in adults and been shown to be able to distinguish steatohepatitis from hepatic steatosis. Cross-sectional studies have associated serum levels of the CK18 fragment with histologic features of liver in individuals with NAFLD. A two-step approach using CK-18 and fibroblast growth factor 21 further improves the accuracy in diagnosing NASH.

So today, the study of various aspects of the proinflammatory biomarkers usage for the NASH diagnosis and definition of further treatment strategy in NAFLD patients with hypertension is very relevant and appropriate.