Non-invasive parameters or liver biopsy in the diagnosis and staging of non-alcoholic fatty liver disease?

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**Background:** Non-alcoholic fatty liver disease (NAFLD) is a common cause of chronic liver disease worldwide and its prevalence continues to increase with the growing outbreak of obesity. NAFLD includes a wide spectrum of diseases from fully benign simple steatosis to steatohepatitis, which could progress to liver cirrhosis and hepatocellular carcinoma. Liver biopsy is considered as the gold standard for assessing disease severity. Recently, non-invasive parameters are considered to substitute liver biopsy in the evaluation of inflammation and fibrosis. The aim of our study was to assess the diagnostic value of serum markers of fibrosis and inflammation in patients with NASH.

**Patients & Methods:** Serum concentrations of hyaluronic acid (HA), cytokeratine-18 fragments, TIMP1 and P3NP were measured and index Hepascore was calculated in 88 patients with NASH indicated for liver biopsy; in 10 patients measurement of hepatic venous pressure gradient was performed.

**Results:** The values of examined parameters were significantly elevated in patients with NASH compared to controls. Significant differences in HA, Hepascore and other parameters were found between cirrhosis and all other fibrosis stages (p<0.05). HA discriminated cirrhosis with AUC 0.996 (sensitivity 94% and specificity 95%) and correlated with the degree of portal hypertension (p=0.002).

**Conclusion:** Significant differences of serum parameters of fibrosis and inflammation were found between patients with NASH with different degrees of fibrosis and controls. Examination of serum HA could discriminate patients with cirrhosis without liver biopsy and could evaluate the degree of portal hypertension. Supported by IGA MZCR: NT 11247/4 and NT 12290/4.

**Biography**

Radan Bruha has completed his Ph.D. at the age of 31 years from Charles University in Prague. He has conducted his postdoctoral studies at 1st Medical School of Charles University. At present he is the head of hepatogastroenterology department at 4th Internal Clinic, General Teaching Hospital, Charles University in Prague. He has published more than 20 papers in reputed journals on the topic of liver and biliary diseases and has presented his work at international congresses. He is serving as a reviewer and an editorial board member for repute international journals.

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