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Diagnosis of liver fibrosis, experience of M2BPGi

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Introduction: Diagnosis of liver fibrosis is important for treatment of fibrosis and alleviation of progression to hepatocellular carcinoma. Mac-2 binding protein glycosylation isomer (M2BPGi) is recently developed, non-invasive biomarker for diagnosis of liver fibrosis. M2BPGi is a protein with altered glycosylation related to liver fibrosis.

Methods: We enrolled 200 patients with liver biopsy and elastography (FibroScan) performed at initial visit. Patient with hepatitis B virus (HBV) infection and hepatitis C virus (HCV) infection were 158 and 42, respectively. M2BPGi is diagnosed by automated imunnoassay system (HISCL-5000, Sysmex, Kobe, Japan) which utilize lectin and glycosylation reaction.

Results: The M2BPGi, and FibroScan are related with liver fibrosis stage by Knodell histologic activity Index (HAI) with statistical significance. M2BPGi demonstrated discriminative properties for diagnosis of 4 stages of liver fibrosis as well as FibroScan. The laboratory parameters, such as hemoglobnin, AST and albumin are discriminated by 3 levels of M2BPGi grade with statistical significance. M2BPGi, ELF and FibroScan predicted fibrosis stage 4 in univariate analysis, but platelet was the only variable that also predicted in multivariate analysis.

Conclusions: M2BPGi can support diagnosis of liver fibrosis and demonstrated discriminative properties for liver fibrosis stages in chronic hepatitis B and C patients. Early diagnosis and advanced fibrosis could be diagnosed by M2BPGi. Further studies with large samples are required for clinical applications.