P-010

Validation of ELF test score for hepatic fibrosis and evaluation in turkish chronic liver disease patients

Sertaç Durusoy [1], Ender Güneş Yeğin [2], Filiz Türe Özdemir[3], Çağlayan Keklikkıran [2], Osman Cavit Özdoğan [2]

[1]*Department of Internal Medicine, Marmara University Schoolf of Medicine, Istanbul, Turkey*
[2]*Department of Gastroenterology, Marmara University School of Medicine, Istanbul, Turkey*
[3]*Department of Immunology, Marmara University School of Medicine, Istanbul, Turkey*

INTRODUCTION: Determining the severity of liver fibrosis without liver biopsy has been getting higher priority inorder to clarify prognosis or response of any treatment in patients with chronic liver disease. The Enhanced Liver Fibrosis (ELF) test is a simple blood test to create an ELF score by combining three markers: hyaluronic acid (HA), amino-terminal propeptide of type III procollagen (PIIINP), and tissue inhibitor of metalloproteinase 1 (TIMP-1). Our aim was to validate the ELF test in a group of biopsy proven chronic hepatits patients in a tertiary care university hospital in Turkey.

METHODS: Patients (Chronic Hepatitis B and C) who have liver biopsies within last 6 to 12 months were recruited and serum samples for ELF test were collected. Liver biopsies of these patients have already been used for digital imaging analysis (DIA) in a previous study for quantification of type III procollagen in liver biopsy samples. The validation of ELF test score solely and, its compenents were done by Ishak and Knodell fibrosis scores. DIA quantification and serum procollagen type III levels were evaluated for any correlation.

RESULTS: Fifty four patients (Female 26) with chronic hepatitis and 37 healthy volunteers (Female 19) were enrolled. The accuracy of the Elf test in distinguishing healthy and liver fibrosis was very good (AUROC: 0.910, sensitivity 84%, specificity: 89%), HA which is a component of the Elf test (AUROC: 0.908, sensitivity 75%, specificity 94.4%) found to be as strong as Elf test. For detection of significant fibrosis (Ishak ≥F2, Knodell ≥F1) cut off value of 8.41 (AUROC: 0.90, sensitivity 87%, specificity 82%), and for detection of severe fibrosis (Ishak ≥F4; Knodell ≥F3) cut-off value of 9.47 (AUROC: 0.79-0.81, sensitivity 75-65%, specificity 75-84%) were found to be appropriate for our population. DIA type III procollagen values were modaretely correlated with the serum type III procollagen values (rs: 0.441, p = 0.001).

CONCLUSION: ELF test is a promising technique to identify patients with liver fibrosis, especially for the clarification of significant and/or severe fibrosis. However, cut off levels for the significant and/or severe fibrosis should be redetermined for our population

Keywords: ELF Score, Hepatic Fibrosis, Chronic Liver Diseases