

P0784 MicroRNA in hepatitis B and hepatitis C-associated hepatocellular carcinoma and cirrhosis

Gokhan Kucukkara¹, Ferhat Gurkan Aslan¹, Bilal Toka¹, Mehmet Koroglu¹, Mustafa Altindis*²

¹ medical school, sakarya university, Sakarya, Turkey, ² Tıp Fakültesi, Sakarya Üniversitesi, Sakarya, Turkey

Background: MicroRNAs (miRNAs) are small, uncoded RNA molecules that regulate post-transcriptional gene expression through base-to-mRNA binding. Recent studies have revealed the role of miRNAs in the pathogenesis of many human diseases, particularly liver diseases. Analysis of circulating miRNAs is used to diagnose hepatocellular carcinoma (HCC) and liver cirrhosis (LC), or to determine the progression of liver disease. In this study, HSA-miRNA-21-3p, hsa-miRNA-29a-3p, hsa-miRNA-122-3p, Hsa-miRNA-192-5p, Hepatitis B (HBV) and Hepatitis C The aim of this study was to determine the biomarker potentials.

Materials/methods: Sixty patients and 26 healthy volunteers were included in the study and the patients were grouped as HBV-HCC (n = 18), HCV-HCC (n = 8), HBV-LC (n = 15) and HCV-LC (n = 19). 5 ml blood samples taken from the participants with gelled dry tubes were centrifuged at 4000 rpm for 10 minutes and the sera separated and stored at -80 ° C until total RNA isolation. Total RNA isolation was performed with the Direct-zol™ RNA MiniPrep (Zymo Research Corp., USA) commercial kit followed by cDNA synthesis and real-time PCR amplification with EPIK miRNA Select Hi / Lo-ROX (Bioline Reagents Ltd., USA). For amplification and analysis, Rotor-Gene Q (QIAGEN, Germany) instrument was used and statistical analyzes were performed with SPSS 21 (IBM, USA) program.

Results: Hsa-miRNA-21-3p and hsa-miRNA-122-3p levels increased 3-4 fold in patients other than HCV-LC and significantly decreased in hsa-miRNA-29a-3p expression in HCV infected patients (p <0,05). hsa-miRNA-192-5p showed a 3-fold increase in HBV-LC group (p <0.05) but not in other groups. The hsa-miRNA-122-3p value, which is known to be specific for liver, is increased in HCV-LC patients. Decrease in hsa-miRNA-29a-3p expression was detected in patients with HCV infection (p <0.05).

Conclusions: In our study, as non-invasive diagnostic markers; MiRNA-21-3p and hsa-miRNA-122 for HBV-HCC and HCV-HCC diseases, hsa-miRNA-21-3p, hsa-miRNA-122 and hsa-miRNA-192-5p for HBV- MiRNA-29a-3p test for LC could be used.

