The association of genetic variation near interleukin 28B and UCKL-1 protein expression in liver tissue of patients with hepatitis C induced hepatocellular carcinoma

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Aim: To evaluate whether testing of IL28B SNPs in rs12979860 and rs8099917 regions and UCKL-1 expression in liver biopsy improves the forecasting of hepatocellular carcinoma (HCC) development risk in patients with HCV cirrhosis.

Patients & Methods: 32 patients (age of 32-70 years) with cirrhosis of HCV etiology were tested. Out of them, in 21/65.5% HCC was diagnosed (I group), 11/34.4% patients had no HCC (II group). The rs12979860 and rs8099917 SNPs were detected by single-nucleotide extension method. UCKL-1 expression was visualized by immunohistochemistry staining with polyclonal rabbit anti-UCKL-1 antibodies and EnVision G2 double staining system.

Results: Significant difference in SNP rs8099917 was found in studied groups, p=0.025. HCC was more frequently diagnosed at rs8099917 T/T (large homozygous SNPs) as compared with non-T/T (18.2%, p<0.05). The HCC risk correlates with bright UCKL-1 staining (p=0.01). In cases of combination of intense UCKL-1 expression with rs12979860 C/C and rs8099917 T/T or T/G, the risk of HCC increases 8.444 times (p=0.046, R²=0.516, χ²=14,961, p=0.001). Regardless IL28B SNPs, in II group UCKL-1 expression was significantly lower.

Conclusions: Bright UCKL-1 expression in combination with IL28B rs12979860 C/C together with rs8099917 T/T or T/G 8.444 times increases risk of HCC developing patients with cirrhosis of HCV etiology.

Biography
Arida Buivydiene was graduated from Vilnius University, Faculty of Medicine in 1992 and completed Gastroenterology Residency at Faculty of Medicine of Vilnius University in 1997. She is currently pursuing Doctoral (PhD) studies at Vilnius University, Faculty of Medicine. She is responsible for the liver recipients and takes care of the patients before and after liver transplantation.

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