## HEPATITIS C

# #P07 - Immunological and biochemical correlation of the main pathogenicity links of chronic viral hepatits C

**T. BEVZ1,** I. BONDARUK1, K. MYRONIUK-KONSTANTYNOVYCH1, L. MOROZ1, H. MARTYNYUK2

(1) National Pirogov Memorial Medical University - Vinnytsya (Ukraine)
(2) Central City Hospital - Rivne (Ukraine)

**Background & Aims**
The progression of chronic hepatitis C (CHC) and the development of liver fibrosis appear due to the multifaceted morphological response to hepatocyte damage. The main task during choosing of management approaches of CHC patients is to assess necro-inflammatory changes degree and the stage of liver fibrosis.

**Methods**
We examined 131 patients with CHC (average age 43.8±0.84 yrs).

**Results**
The ALT 116.72±9.31 IU/l was determined in the carriers of the GC genotype, which was 1.79 fold higher ($p<0.001$) than in the GG-carriers, and in CC-genotype it was 2.57 fold higher ($p < 0.001$). The level of AST in serum of GC/CC carriers was 77.09 ± 7.01 IU/l/ 00.46±11.79 IU/l, vs. among GG-carriers - 44.39±2.49 IU/l ($p<0.001$). LDH level was significantly higher in patients with the C allele of the TLR4 gene ($p<0.05$). The level of total bilirubin in GC and CC carriers were 1.55 and 1.68 fold higher ($p<0.001$), accordingly, than among GG individuals. The level of GGT in the CC-patients was higher ($p<0.001$) than in GG ones: 155.53±18.38 IU/l vs. 57.56±3.67 IU/l. The presence of the C allele reliably affected the reduction of total protein and albumin levels. Cholesterol level in GC and CC patients was higher in 1.22 fold ($p < 0.001$) than in GG ones. The assessment of the direction, strength and reliability of correlation relations between CC/GC genotypes of the TLR4 gene and indexes of the damage of the liver in patients with CHC had shown direct correlation of significant strength in the presence of the C allele with the level of ALT ($r=0.52$; $p<0.05$) and total bilirubin ($r=0.56$; $p<0.05$), direct moderate correlation to AST ($r=0.44$; $p<0.05$), GGT ($r=0.48$; $p<0.05$), cholesterol ($r=0.44$; $p<0.05$), moderate strength inverse correlation to total protein level ($r=-0.34$; $< 0.05$) and albumin ($r=-0.51$; $p<0.05$). ALT (beta=0.38; p=0.004), albumin (beta=-0.2; p=0.009) and total bilirubin (beta=0.32; p=00001) as independent clinical predictors. The factor logistic model was reliable with the coefficient of determination of 52%.

**Conclusions**
Carriers with CC, GC genotypes of the TLR4 gene rs11536889 +3725G/C have significantly more severe course of CHC than GG ones that is showed by cytolytic, cholestatic and hepatocellular insufficiency syndromes indexes.