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## **Abstract Book**

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### Expression of immunological markers in inflammatory infiltrate cells of liver tissue in patients with HIV/HCV coinfection

Matsiyeuskaya N<sup>1</sup>, Zubritsky M<sup>2</sup>

<sup>1</sup>Grodno State Medical University, Grodno, Belarus, <sup>2</sup>Grodno regional department of pathomorphology, Grodno, Belarus

**Background:** Liver pathology leads to change of liver lymphocytes composition results in inflammatory infiltrate cells of liver tissue (IICL) formation.

**Aim of study:** to evaluate the expression of immunological markers in IICL in patients with HIV/HCV coinfection.

**Material & Methods:** anti-human CD4, anti-human CD8, anti-human CD20, anti-human CD56, anti-human HLA-DP, DQ, DR antigen, anti-human CD68 and polyclonal rabbit anti-Herpes Simplex Virus 1 and 2 types in standard dilution (DakoCytomation) and goat antibodies anti-human CD195 (CCR5) and anti-human CD184 (CXCR4) (AbDserotec) were used. Expression of markers were evaluated in IICL in paraffined autopsy liver tissue in 2 groups of patients: 1st group - 18 patients with HIV/HCV (mean age -  $36,1 \pm 5,1$ , female - 11 (61,1%), AIDS - 15 (83,3%), liver cirrhosis - 6 (33,3%)) the 2nd group - 15 (mean age -  $39,7 \pm 10,1$  ys, female - 7 (46,7%), AIDS - 14 (93,3%), liver cirrhosis - 1 (6,7%)). The percentage of cells in the inflammatory infiltrate expressing a particular marker was counted. «Statistica» version 10 was used, data are presented as Me and interquartile range (IQRs).

**Results:** In HIV / HCV coinfection, more pronounced CD8 + expression in IICL was observed in comparison with the 2nd group: 20,0 (20,0–30,0) vs. 20,0 (10,0–20,0), respectively,  $p < 0,05$ . Lower CXCR4+ expression in IICL was observed in the 1st group in compare with the 2nd one: 10,0 (10,0–20,0) vs. 10,0 (10,0–30,0), respectively,  $p < 0,05$ . The ratio of expression of CCR5 to CXCR4 in the IICL in the 1st group was 1.0 (1.0–2.0) and was statistically higher in comparison with the median ratio of the same indices in the 2nd group - 1.0 (0, 5–1.0),  $p = 0.02$ .

Right correlation (Spearman) was indicated among HIV/HCV coinfection and CD8+ expression in IICL:

$R = 0,39$ ,  $p < 0,02$ . Negative correlation (Spearman) was indicated among AIDS and CD68+ expression in IICL:  $R = 0,43$ ,  $p = 0,01$  in the 1st group.

In group 1 patients, in the presence of liver cirrhosis (LC) compared with patients without LC more pronounced expression in IICL of HLA-DP, DQ, DR+ : 45 (30–50) vs. 15 (10–30), respectively,  $p < 0,05$  and CD56+ : 35 (30–50) vs. 20 (20–30) had been established, respectively,  $p < 0,05$ . Additionally a more pronounced HSV 1 and 2 types expression in the hepatocytes and Kupffer cells was established in HIV/HCV coinfecting patients with LC in compare with those without LC.

**Conclusions:** Coinfection HIV/HCV is associated with more activated cellular immune response and more pronounced inflammatory reactions in the liver in compare with HIV-infected patients without HCV. Liver cirrhosis in HIV/HCV coinfection leads to more expressed activation of intracellular immunity which associated with emergence of opportunistic infections with intrahepatic expression.