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Poster Session VI
Viral hepatitis and HIV/HCV co-infection

IL28B POLYMORPHISM AND VIROLOGICAL RESPONSE DURING 12 WEEKS OF PEGYLATED INTERFERON AND RIBAVIRIN TREATMENT IN POLISH CHRONIC HEPATITIS C PATIENTS

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Objectives. Identification of molecular markers playing role in predicting anti-HCV treatment outcome would facilitate therapy optimizing. GWAS has demonstrated that genetic polymorphism at rs12979860 (C/T) near IL28B gene is a strong predictor of Sustained Virological Response (SVR) in chronic hepatitis C (CHC) patients treated with pegylated interferon α and ribavirin (pegIFN-α + RBV). Moreover, monitoring viral kinetics can help identify patients with high chances of treatment success. The aim of this study was to examine predictive value of IL28B SNP rs12979860 (C/T) for on-treatment virological response in Polish CHC patients treated with pegIFN-α and RBV. **Methods.** The study involved 35 CHC patients (HCV genotype 1b). To determine treatment effect, serum HCV-RNA was measured on the first day of therapy and then after 4 and 12 weeks of treatment by one-step quantitative RT-PCR. Genomic DNA, isolated from peripheral blood lymphocytes, was used for IL28B rs12979860 (C/T) genotyping by High Resolution Melting (HRM) method. Results were confirmed by DNA sequencing. **Results.** 13 patients (37.1%) became HCV RNA negative at week 4. (RVR - Rapid Virological Response) and 10 (28.6%) at week 12. (cEVR - complete Early Virological Response). 12 patients (34.3%) did not achieve virological response until 12. weeks (PNR - Primary Non-Response). The mean baseline viral load values were comparable among three groups - $6.69x10^4$ IU/ml *vs* $7.32x10^4$ IU/ml *vs* $3.51x10^4$ IU/ml in RVR, cEVR and PNR group, respectively. The rs12979860 CC, CT and TT genotypes were found in 8 (22.9%), 23 (65.7%), 4 (11.4%) patients, respectively. Among patients with genotype CC, 75% achieved RVR and 25% achieved cEVR. Among CT genotype, RVR, cEVR and PNR were observed in 30.5%, 30.5% and 39% of patients, respectively. 25% of patients with the genotype TT achieved cEVR and 75% achieved PNR. Favorable CC was not observed in PNR and unfavorable TT genotype was not observed in RVR group. **Conclusions.** The results confirm that IL28B rs12979860 C/T polymorphism may predicts virological response in CHC during early phase of pegIFN + RBV treatment.

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