Factors associated with sustained viral response among HCV genotype 2 patients treated with direct acting antivirals within HCV elimination program in Georgia

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Background and Aims: Georgia has a high burden of HCV infection; a 2015 national serosurvey found that an estimated 5.4% of adults are currently infected with HCV. On April 28, 2015, Georgia launched the world's first National HCV Elimination Program that included free of charge treatment with DAAs for all HCV infected persons. The DAAs for the elimination program are donated by Gilead Sciences, and sofosbuvir was the first DAA available for the program. Later sofosbuvir/ledipasvir became available. Objective of this study was to assess the real-world data of treatment outcome among patients with HCV genotype2 treated with direct acting antivirals.

Methods: Study enrolled genotype2 patients, enrolled in HCV elimination program in Georgia and treated at one of the leading clinics providing HCV care services. These patients were treated with sofosbuvir or sofosbuvir/ledipasvir in combination with ribavirin. We analysed demographic and clinical data of patients achieving sustained viral response (SVR) by the time of analysis. Fibrosis level of patients was measured by liver elastography or FIB4 score (>=F3 and >3.25 were considered as high fibrosis level, respectively) Bivariate and logistic regression analysis was used to assess the association between SVR and several other factors.

Results: A total of 817 genotype 2 patients were eligible for the analysis; there were more males (88.9%). Females had higher chance of achieving SVR compared to males (98.9% vs 94.5%, $p<0.05$). Patients treated with sofosbuvir/ledipasvir and ribavirin combination were more likely to achieve SVR (97.6% as opposed to 77.8% of those treated with sofosbuvir and ribavirin). 99.4% of patients with low fibrosis level cleared the virus with 87.1% of those having high fibrosis level ($p<0.0001$). There was no statistically significant difference in cure rate of patients by the following variables: ever using injection drugs, socio-economic status, diabetes and body mass index. After adjustment, independent predictors of SVR were treatment regimen and liver fibrosis level.

Conclusions: Real-world experience among HCV genotype2 patients demonstrated very high SVR rate for those treated with sofosbuvir/ledipasvir and ribavirin combination.