RISK OF HEPATOCELLULAR CARCINOMA IN PATIENTS WITH ADVANCED LIVER FIBROSIS/CIRRHOSIS SUCCESSFULLY TREATED WITH DAAs WITHIN THE NATIONAL HEPATITIS C ELIMINATION PROGRAM of GEORGIA

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Background and Aims:

Direct-acting antiviral (DAA) therapy has revolutionized the treatment of hepatitis C, with very high rates of sustained viral response (SVR) and an excellent safety profile. As a result, the morbidity and mortality associated with HCV infection have dramatically decreased. However, data on the impact of DAA therapy on the natural history and development of Hepatocellular carcinoma (HCC) are limited especially in patients with advanced liver fibrosis/cirrhosis. The aim of the study was to explore the occurrence of HCC in chronic hepatitis C patients with advanced liver fibrosis/cirrhosis who were successfully treated with DAAs within the national hepatitis C elimination program of Georgia.

Methods

This longitudinal study (with 4 years follow up) included 369 patients with advanced liver fibrosis/cirrhosis (defined by FIB-4 score and transient elastography), who achieved SVR and who were followed through 2017- 2020.

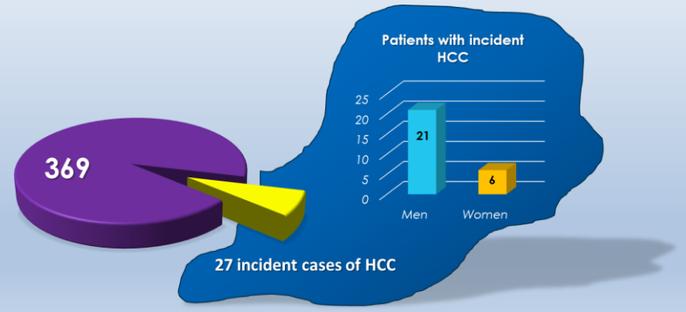
We estimated cumulative and annual incident risks of HCC by period of follow-up. All patients included in the study underwent the following investigations: abdominal ultrasound, AFP, liver function tests and transient elastography every 6 months. The diagnosis of HCC was confirmed by MRI and/or liver biopsy (in case of necessity). The patient had neither HCC nor decompensated cirrhosis prior to the study.

Results

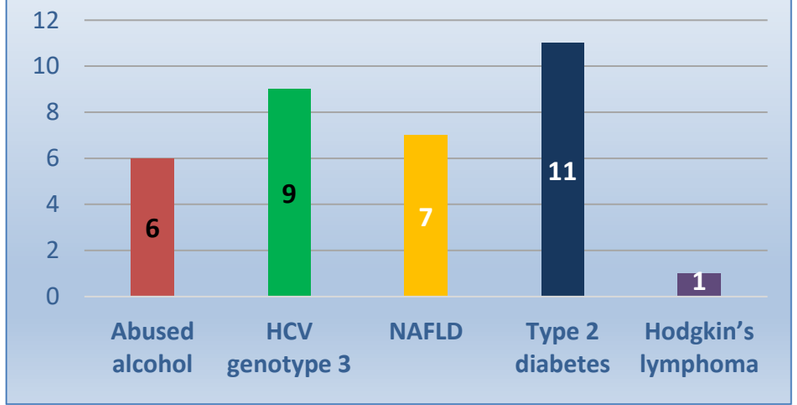
Among 369 patients who achieved SVR, 27 incident cases of HCC were detected during the mean 3.9 years of follow-up. Among 27 patients with incident HCC 21 were men and 6 women. Mean age at the time of HCC diagnosis was 49 years.

Results

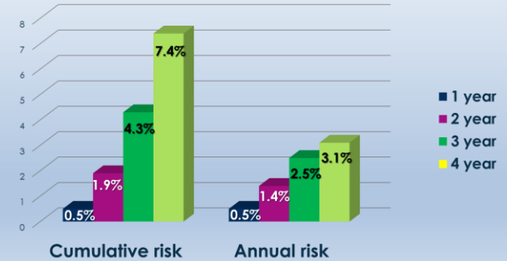
DISTRIBUTION OF INCIDENT HCC AFTER SVR BY GENDER (N=369)



CLINICAL CHARACTERISTICS AMONG INCIDENT HCC CASES (N=27)



CUMULATIVE AND ANNUAL RISKS OF HCC AMONG PATIENTS WITH SVR (N=369)



The cumulative 1, 2, 3 and 4-year risks of HCC were 0.5%, 1.9%, 4.3%, and 7.4% respectively. While annual risk estimates were 0.5%, 1.4%, 2.5% and 3.1% for years 1, 2, 3, and 4 respectively. All patients with incident HCC had liver cirrhosis. Among 27 patients with HCC: 6 patients abused alcohol, 9 patients had HCV genotype 3, 7 patients had NAFLD, 11 patients had type 2 diabetes, and 1 patient had Hodgkin's lymphoma.

Conclusions

Patients with advanced liver fibrosis/cirrhosis remain at increased risk of developing HCC even after SVR. Therefore all patients with advanced fibrosis/cirrhosis require close surveillance for HCC regardless of SVR. Whether age, NAFLD, diabetes, alcohol abuse or other comorbidities increase the risk of HCC after successful DAA therapy need to be further explored.

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