Advanced liver disease outcomes after Hepatitis C viral eradication according to Human Immunodeficiency Virus coinfection in PITER cohort

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Introduction/Summary

1. Worldwide, approximately 2.3 million people are co-infected with Human Immunodeficiency Virus (HIV) and Hepatitis C Virus (HCV), giving rise to a global co-infection prevalence in HIV infected individuals of 62% (1). It is shown that HIV accelerates the course of HCV-related chronic liver disease.
2. The development of direct-acting antivirals (DAA) for HCV has revolutionized the treatment of HCV, including its treatment in patients with HIV coinfection (2). However, little is known about whether HIV coinfection modifies outcomes of HCV-related liver disease after achieving SVR.
3. The aim of the present analysis was to evaluate the sociodemographic and clinical profile of HCV/HIV coinfected versus HCV monoinfected patients in a real-life patients’ cohort with the final goal to prospectively evaluate the clinical impact of DAA treatment in patients with progressive/severe liver disease according to HIV coinfection status.

Study Design

1. The study population consisted of patients with chronic HCV infection consecutively enrolled in Piattaforma Italiana per lo studio della Terapia delle epatiti Virali (PITER) between April 2014 and June 2019, who were not receiving HCV treatment at the time of inclusion, and could be considered representative of the HCV chronic infected population in care in Italy (3).

Methods

1. Outcome variables. The study outcomes following HCV eradication were evaluated in DAA treated patients with pre-treatment diagnosis of liver cirrhosis excluding patients with a history of liver transplantation prior to treatment.
2. Statistical analysis. Patient’s main baseline characteristics were given as median and range or as proportions (N and %) for continuous and categorical variables, respectively. The Mann-Whitney U test was used for continuous variables to assess differences between distribution, and the Chi-squared test was used for comparisons of proportions. A p-value of <0.05 was considered statistically significant.
3. Variables independently associated to HCC incidence, the appearance of a decompensating event and changes in Child-Pugh (C-P) class, after the end of treatment were evaluated by Cox proportional hazard models.
4. In order to confirm the main results of the analyses, the propensity score method was estimated using a nonparsimonious logistic regression model with the HCV infection as the dependent variable and all measured potential confounders as covariates. The following variables at baseline have been included: age, sex, BMI, alcohol, ALT, AST, platelets, albumin, bilirubin, INR, smoking status, anti-HCV, HbsAg, previous Interferon, HCC. Relationship between each outcome and HCV adjusted by propensity score was evaluated by multiple Cox regression analyses.

Analysis of liver disease outcomes following SVR12

Clinical outcomes following SVR12 in patients with liver cirrhosis

Overall, no significant differences were observed among coinfected and monoinfected patients for the different variables evaluated.

Conclusion

The results of the present study have shown that after successful DAA treatment, patients with advanced liver disease and HIV coinfection have a similar probability of developing liver complications as HCV monoinfected patients. Management of liver disease in HIV/HCV coinfected patients does not change and who achieve SVR with DAA should not differ from that of HCV monoinfected patients. "Curing" HCV is not the ultimate goal in patients with severe liver disease in both coinfected and monoinfected patients. On the contrary, cirrhosis is established the risk of disease progression is decreased, but still persists regardless of viral eradication.

Reference