Body mass index (BMI) and alpha-feto protein (AFP) level correlate with the severity of HCV-induced fibrosis in a cohort of Egyptian patients with chronic HCV

Marwa Tammam ,Amal Ahmed Mohamed, Amr Ali Hemeda, Ramy Karam Aziz, Mohamed Salaheldin Abdel-Hakeem

Abstract

Background
Viral hepatitis is the seventh leading cause of mortality globally, and half of this mortality is attributed to Hepatitis C virus (HCV). Egypt has the highest HCV prevalence worldwide, with an estimated 14.7% of the population being HCV positive. HCV infection is the primary cause of liver fibrosis, cirrhosis and hepatocellular carcinoma. Liver fibrosis varies in severity during chronic HCV infection, and 10-20% of chronic hepatitis C (CHC) patients with severe fibrosis develop cirrhosis. The goal of this work was to asses clinico-demographic predictors of severity of HCV-induced fibrosis in a cohort of Egyptian patients.
Results: A cohort of Egyptian patients with chronic HCV genotype 4a infection showed significant association between severe fibrosis stages and obesity, represented by a higher body mass index (BMI), low albumin level, high alpha feto-protein (AFP) level, low thyroid stimulating hormones (TSH) level and high alkaline phosphatase (ALP) level. Multivariate analysis delineated BMI, TSH, and ALP as independent significant variables that could predict the risk of fibrosis severity in HCV infections.
Conclusion: This study argues in favor of using the biomarker profile of CHC patients infected with HCV genotype 4a to identify patients at higher risk of developing severe fibrosis, which is a necessary first step towards precision medicine via patient stratification.

Future Journal of Pharmaceutical Sciences 2020, October