Does hepatitis C virus enhance prevalence of idiopathic pulmonary fibrosis and affect its severity? An Egyptian study


Abstract:

Background Idiopathic pulmonary fibrosis (IPF) is the most common and severe form of pulmonary fibrosis characterized by gradual loss of pulmonary function. Despite rigorous research, the etiology of IPF has remained unknown. Viruses, for example, hepatitis C virus (HCV), had been implicated in IPF etiology; however, data on the prevalence of HCV infection in IPF patients were limited. Aim of the study Our aims were to assess the prevalence of HCV antibodies in IPF patients and to assess the relationship between severity of pulmonary and hepatic dysfunction. Materials and methods IPF patients were prospectively enrolled from Chest Department, Assiut University Hospital. HCV antibodies were detected using the third-generation enzyme-linked immunosorbent assay. Patients' pulmonary and hepatic functions were evaluated. Results HCV antibodies were significantly higher in IPF patients than in controls (29.4 vs. 14%, P= 0.04). Patients with HCV had significantly more severe hypoxemia and lower diffusing capacity for carbon monoxide than those without HCV (47.7 ± 11.3 vs. 54 ± 18.7, P= 0.03 and 52.7 ± 8.4 vs. 67.3 ± 9.5, P= 0.01, respectively). There was no significant difference between HCV-positive IPF patients and HCV-negative IPF patients regarding spirometric parameters and liver function parameters. Conclusion This higher prevalence of HCV and its effect on pulmonary functions in IPF patients may contribute in IPF pathogenesis, which hopefully will allow currently available antiviral drugs or novel therapeutic approaches to treat or modify the course of this devastating disease.

Keywords:

hepatitis C virus, idiopathic pulmonary fibrosis, immunopathogenesis

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