



EDITORIAL

Is Liver Fibrosis in Association with Opium Addiction and Intravenous Drug Abuse among Hepatitis C Virus-infected Patients?

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The most common underlying reason for cirrhosis lead to liver transplantation in the United States is the hepatitis C virus (HCV) infection, while in developing countries; the hepatitis B virus (HBV) infection is the most common reason for liver transplantation. In patients with HCV infection, disease progression to end-stage liver damage problem, and eventually, cirrhosis is different from a patient to patient due to virus type, host state, physical condition of patient and environmental factors. It is found that alcohol use and smoking are two environmental factors to affect hepatitis progression. About smoking, various mechanisms have been raised like increase stress, alter mental condition, bronchospasm, Increases phlegm production in lung, persistent cough, atherosclerosis, thrombosis, constriction of blood vessels, heart rate Increased, blood pressure Increased, gastroesophageal reflux Disease found as rapid and immediate effect on the gastrointestinal System, peptic ulcers are found on the muscular layers of the oesophagus, stomach, and a portion of the small intestine, Smoking very rapidly the blood supply, immune response, and healing mechanisms of the mouth, resulting in the rapid initiation and progression of infections, inflammation of the middle ear, sinus inflammation, inflammation of the inner lining of the nasal passages, inflammation of the lining of the lungs etc. As a cigarette consists of substances that induce increased production of inflammatory cytokines, thus satellite cells would be activated, and it progresses to liver fibrosis. On the other hand, cigarette causes increase in carboxy-hemoglobin indirectly and, therefore, tissue hypoxia, increased secretion of erythropoietin, polycythemia, and eventually hepatic tissue injury following increased iron burden. Theoretically, inhalator opium consumption can exacerbate tissue damage with similar mechanisms mentioned above. Besides, impurities such as lead and arsenic added to opium may affect liver damage negatively.

This is a case-control study conducted on 58 patients suffering in hepatitis C virus infection referred to Taleghani Hospital (affiliated to Tehran University of Medical Sciences) in 2012. Patients with confirmed HCV infection through anti-HCV antibody study were included. Exclusion criteria were co-infection of HBV or HIV in a confirmed HCV patient, active alcoholism, and being under anti-viral therapy.

Patients' information was derived through an interview, para-clinical laboratory tests, patients' past medical records, and liver biopsy. By using the ELISA method and PCR method anti-HCV antibody and quantitative HCV-RNA count were performed for all patients, respectively.

From this study it is found that, Seventeen patients (29.3%) were informed about HCV infection following blood donation and HCV was detected in 23 (39.7%) patients incidentally through laboratory check-ups. In general, 69% of patients found out their HCV infection incidentally. Forty-five patients (77.6%) had unknown genotype in their records, followed by 12% who had 1A genotype of HCV. The cases and controls comparison based on the liver inflammation grading showed significant older age among the control group as the mean age of cases with liver inflammation was 33.87 ± 9.30 years (range: 22-53 years), and controls was 40.86 ± 12.24 years (range: 19-67 years) (P-value=0.024). Also, a comparison of the two groups in terms of liver fibrosis score revealed a remarkable higher age of cases than controls; 42.45 ± 10.44 years (range: 23-61 years) for cases and 35.79 ± 11.65 years (19-67 years) for controls (P-value=0.037).

Not only smoking and alcohol there are various types of risk factors that can affect the progression of hepatic failure among viral hepatitis affected patients. These factors include age, obesity, male gender, race, alcohol consumption, and co-infection of HBV and HCV.

In this study, not detect a statistically significant association between opium addiction with whether the hepatic-

inflammation grading or hepatic fibrosis score.

These findings have been found while being an intravenous drug abuser was significantly in association with hepatic inflammation grading, but hepatic fibrosis score. Although it was found that no association between opium consumption and liver inflammation and fibrosis state but similar to smoking, the following mechanism can be raised for the effects of opium on liver fibrosis.

In this hypothesis, fibrosis progression and increased level of carboxy-hemoglobin following opium consumption can cause tissue hypoxia followed by erythropoietin secretion; thus polycythemia occurs, and by iron overload, hepatic failure would progress.

On the otherhand, impurities added to opium in order to make them weighted can have adverse effects on liver function leading to liver fibrosis.