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Chronic Hepatitis C, Genotyping, Metabolic Status and Body Mass Index in Iranian Population

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Letter to Editor

Genotyping, ethnicity, body mass index and the metabolic syndrome are believed to affect progression of hepatitis C virus (HCV) infection [1], but the interaction between these factors is unidentified whereas, it is believed that environmental and host factors mutually impact on HCV-related liver disease within ethnic groups [2]; we designed this cohort study in order to elucidate the factors responsible for HCV infection prevalence in Iranian populations.

Well documented environmental elements include alcohol, tobacco, and marijuana which are related to the development of fibrosis [3-5]. While host factors as well as older age and male sex also are correlates with HCV presentation [6]. The relationship between ethnicity, as a host factor, and the progression of HCV has not still been explained [7], while large cohort data are scarce too. For example, the metabolic syndrome prevalence was more frequent in Hispanics [8] and steatohepatitis and fibrosis were seen in non-Hispanic white and Hispanic obesity surgery patients compared with African Americans [9]. In addition, tobacco and opium dependency also may differ by ethnicity. Opium addiction in Iran is a serious national problem [10]. On the other hand, because Iran is of a passage of drug and opiate trafficking from east Asia to Europe [11], it may affect Iranian's opiate dependency and virologic features in return.

The current study represents a cross sectional analysis of a large HCV screening project at a referral clinic in Tehran since 2006 to 2013 with an aim to assess demographic, epidemiologic, body mass index (BMI) and virologic features as well as triglyceride, cholesterol and liver biochemistry. After approval by our institutional ethics committee and obtaining informed consent, 83 consecutive patients, confirmed by HCV-RNA test, were included in the study and mentioned data was gathered. The median age was 46.5 ± 12.8 , 61 patients were male and 22 female. HCV genotype 1 was predominantly seen (64%); the most frequent subtype was 1a followed by 1b and 29.3% were genotype 3. Moreover, genotypes did not vary among other demographic and metabolic factors in this study. The mean of patients' BMI was 24.98 ± 3.9 kg/m². Hypertriglyceridemia (serum triglyceride >150 mg/dl) and

hypercholesterolemia (total cholesterol ≥ 240 mg/dl) was seen in 24.4% and 7.3% of patients, respectively. Finally, there was no correlation between aminotransferases, albumin, age and BMI of patients with serum triglyceride and cholesterol ($p > 0.05$).

In general, Iranian genotyping was very similar to epidemiologic data of European countries despite position of our country in the Middle East, which indicate that the pattern of genotypes is somehow unusual. Our results validate previous studies evidence [12], that may also explicate our local antiviral regimen need. In addition, the frequency of hypertriglyceridemia and hypercholesterolemia were not higher than Iranian normal population according to retrieved data from previous country-wide studies [13,14].

In summary, based on these reports, all our patients can undergo a specific therapeutic protocol according to the underlying genotyping status. Furthermore there were no differences between lipid profile and other possible factors evaluated in this study.

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