Non Alcoholic Fatty Liver Disease in Southern Iran: A Population Based Study

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Abstract

Background

Population based studies on prevalence and risk factors of NAFLD in Iranian population are few. The prevalence of NAFLD and non alcoholic steatohepatitis (NASH) in Iranians varies from 2.9% to 7.1% in general population and 55.8% in patients with type 2 diabetes mellitus.

Objectives

To determine the prevalence and determinants of non alcoholic fatty liver disease (NAFLD) in a sample of adult Iranian general population.

Patients and Methods

This was a cross-sectional study being performed in Shiraz, southern Iran during a 10-month period from November 2010 to September 2011 through cluster random sampling of Iranian general population in Shiraz region. All individuals undergone anthropometric, blood pressure measurements, thorough medical history and physical examinations. Laboratory measurements included fasting blood glucose (FBS), lipid profile, complete blood count (CBC) and liver function tests. NAFLD was diagnosed by transabdominal ultrasonography.

Results

819 subjects were included in this study among which were 340 males (41.5%) and 479 females (58.5%) with the mean age of 43.1 ± 14.1 years. NAFLD was diagnosed in 176 (21.5%) subjects. Patients with NAFLD were significantly older ($P < 0.001$), had higher proportion of male gender ($P = 0.004$) and had higher BMI ($P < 0.001$). They also had higher prevalence of hypertension ($P < 0.001$), high FBS ($P < 0.001$), high cholesterol ($P = 0.026$), high triglyceride ($P < 0.001$) and high waist circumference ($P < 0.001$). Taking all these together, patients with NAFLD had significantly higher prevalence of metabolic syndrome when compared to healthy subjects ($P < 0.001$).

Conclusion

The prevalence of NAFLD in this group of Iranian adult general population is 21.5%. NAFLD in Iranian population is associated with male gender, old age, obesity, and features of metabolic syndrome.

Keywords: Non alcoholic Fatty Liver Disease, Prevalence, Risk Factors, Metabolic Syndrome, Iran