

Nutritional profile of Lebanese NAFLD patients: A case-control study

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Objectives: The aim of this study is to evaluate the nutritional profile of Lebanese non-alcoholic fatty liver disease (NAFLD) patients (cases) and compare it with controls.

Methods: From November 2010 to June 2013, 255 NAFLD Lebanese patients; 197 men (mean age: 44±12.4), 58 women (mean age: 40.3±7.9) and 108 controls; 39 men (mean age 42±14.5) and 69 women (mean age 36.7±12.8) were recruited at the outpatient clinic of the department of Gastroenterology of a university hospital. A valid food frequency questionnaire (Harvard, Nurses' Health Study, 2010) and a 24 hours recall were administered. Anthropometric measures, blood pressure and biological markers were also taken in both groups.

Results: Mean body mass index of NAFLD patients (cases) was (31.6±5 kg/m²) as compared to (24.8±4kg/m²) for controls (p<0.0001). According to IDF classification (International Diabetes Federation, 2005), 67.8% of cases versus 14.6% controls had more than 3 parameters of metabolic syndrome and 48.5% of them versus 18.8% for controls had a homeostasis model assessment (HOMA-IR) ≥3 (p<0.0001). On multiple logistic regression analysis, HOMA-IR, intake of fructose (g) and absence of physical activity were significantly associated with a increase risk for NAFLD; HOMA-IR (odd ratio 5.17, 95% confidence interval, 1.52-17.59), p=0.009, fructose (odd ratio 1.03, 95% confidence interval, 1.01-1.06), p=0.027 and presence of physical activity (odd ratio 0.44, 95% confidence interval, 0.20-0.99), p=0.047, after adjustment for gender, calorie intake/day, BMI, medical and family medical history.

Conclusion: High HOMA-IR, high fructose intake and lack of physical activity were the main potential risk factors for NAFLD Lebanese patients

Keywords: Nonalcoholic fatty liver disease, HOMA-IR, fructose, metabolic syndrome, physical activity