Letter to Editor

Vol. 6, No. 1, 47-48
http://dx.doi.org/10.15280/jlm.2016.6.1.47

Journal of Lifestyle Medicine

Body Composition and Non-alcoholic Fatty Liver Disease

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To the Editor:

Dear Sir,

We have read with a great interest the review published by Bang and Cho, on the relationship between non-alcoholic fatty liver disease (NAFLD) and unhealthy outcomes [1]. The prevalence of NAFLD in the Western world is estimated between 20-30% in the general adult population (i.e. Greece, Italy, Spain), and between 15-20% in Asian countries (i.e., India, China, Japan) [2]. The prevalence of NAFLD is 80-90% in obese, 30-50% in patients with diabetes and up to 90% in patients with hyperlipidemia [3]. Central obesity, defined as a presence of excess fat in the abdominal area, is frequently associated with NAFLD and their coexistence in the same subjects increases the likelihood of having more advanced forms of liver disease [4]. NAFLD progression is associated not only with an high body mass index (BMI), but also with central fat deposition. In this way, body composition (BC) variables measured by anthropometry, may be used as indicators of NAFLD.

Recently, we have published a study on the relationship between central fat mass, NAFLD and the circulating levels of adiponectin, an anti-inflammatory adipokine, able to reduce body fat, to improve insulin sensitivity, and inversely associated with hepatic fat accumulation and body mass index (BMI) with BMI [5]. Using dual-energy X-ray absorptiometry, we quantified the regional distribution of adipose tissue and we found the association between increased central fat mass, and liver fat accumulation. This observation is in agreement with the progression of the values of BMI and waist circumference observed in our series. Concerning the relationship between BC and NAFLD, our study has shown that central fat accumulation constitutes an important determinant of NAFLD in overweight patients, independently to BMI. We described also that severity of NAFLD is characterized by insulin resistance and low adiponectin serum levels, two pathogenetic factors that can increase the concentrations of intra-cellular fatty acids, and may enhance oxidative stress.

Considering these data, and in accordance with the Author, we highlight the association between NAFLD and metabolic disorders. We underline also the importance of the BC assessment in patients with NAFLD, not only to detect central fat accumulation, but also to define a correct therapeutic strategy and follow-up in clinical practice.

Received: January 22, 2016, Accepted: February 2, 2016

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