Reviewer’s report

Title: Elevated serum levels of aminotransferases in relation to unhealthy foods intake: Tehran Lipid and Glucose Study

Version: 0 Date: 28 Jun 2019

Reviewer: Daniele Marcon

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Prognostic features of non-alcoholic fatty liver disease (NAFLD) include altered levels of liver enzymes, in particular aminotransferases. Elevated levels of alanine aminotransferase (ALT) are suggested as prognostic features of liver dysfunction and are strongly correlated with NAFLD. Serum ALT to aspartate aminotransferase (AST) ratio (ALT/AST) is the most relevant predictor of fatty liver and other conditions.

Diet play an important role in the development of NAFLD and poor dietary quality, characterized by consumption of high intake of calorie dense products with small amount of nutrients (usually consumed in the typical western diet), was related to increased risk of metabolic syndrome, obesity, cardiovascular disease and NAFLD.

The aim of the study is to determine the association between the consumption of western dietary patterns (characterized by unhealthy foods as fast foods, soft drinks, sweet and salty snacks) and elevated levels of ALT and ALT to AST ratio, as indicators of development of NAFLD. The study provides evidence underlining the link between specific components of western diet and liver enzymes levels. Although the association between poor quality diet and NAFLD was reported previously, data with this specific relation are limited.

Despite the limitations underlined in the study and the lack of specific and reliable cut-off for elevated liver enzymes in relation to NAFLD, the article is overall understandable and clearly written. Given the importance of diet in the development of NAFLD, it would be useful to also analyze the impact on aminotrasferases of other fundamental foods such as fruits, vegetables and legumes (main sources of micronutrients), since other authors underlined a role in the pathology (Treatment of NAFLD with diet, physical activity and exercise. Manuel Romero-Gómez, Shira Zelber-Sagi, Michael Trenell. 2017).

Results are clear but it would be better to describe more the differences between the groups in terms of caloric intake and percentage of macronutrients with the details shown in table 2.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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Yes

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