Reviewer's report

Title: NOX2-generated oxidative stress is associated with severity of ultrasound liver steatosis in patients with non-alcoholic fatty liver disease

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Reviewer: Begoña Ochoa

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Given that few studies have reported increased circulating levels of oxidative stress markers in patients with non-alcoholic fatty liver and no published study has been performed with newer markers of systemic oxidative stress, the authors aim to assess the relationship between urinary 8-iso-prostaglandin F2α, a well-admitted marker of oxidative stress, and serum soluble NOX2-derived peptide (sNOX2-dp) and the severity of liver steatosis in subjects with non-alcoholic fatty liver. Overall, the study is designed and performed appropriately, including an ample cohort of patients, although it elicits the drawbacks that the authors themselves point out in the Discussion section. In summary, the study demonstrates that the levels of urinary 8-iso-PGF2α were independent predictors of non-alcoholic fatty liver and a strong association of urinary 8-iso-PGF2α and of serum sNOX2-dp with the severity of steatosis at ultrasound was also observed. These findings are interesting and valid in clinical practice.

Minor essential revisions:

The authors conclude "We demonstrated an increased NOX2-generated oxidative stress in subjects with non-alcoholic fatty liver. Oxidative stress was independent from obesity, diabetes and metabolic syndrome and increased with the severity of liver steatosis at ultrasound." None of the sentences is right. Serum oxidative stress markers are general markers of the oxidant-antioxidant balance of the whole body and no measurement of free radicals derived from NOX2 has been performed. Neither "such oxidative stress" can be said that is independent of the conditions alluded. Therefore, conclusions should be rewritten properly.

Although the authors report that subjects underwent routine biochemical evaluation, they should clearly state how urine and blood collection and treatment was performed, otherwise experimental conditions may be not reproducible.

Tables. Parameters should be clearly defined in footnotes in all tables. Revise commas and dots.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare no competing interest.