Reviewer's report

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

Version: 3 Date: 16 December 2013

Reviewer: Carmine Finelli

Reviewer's report:

Major Compulsory Revisions

• What is the concentration of 8-iso-prostaglandin F2α (8-iso-PGF2α) in patients with NAFLD without METS?
• Are patients smoking?
• What is the renal function of patients?!

In fact, the prostaglandin, 8-iso-PGF2α, is an isoprostane that is produced by the non-enzymatic peroxidation of arachidonic acid in membrane phospholipids. Measurement of 8-iso-PGF2α is a reliable tool for the identification of subjects with enhanced rates of lipid peroxidation. Enhanced formation of 8-iso-PGF2α has been reported in association with several cardiovascular risk factors, as well as atherosclerosis. Cigarette smoking is a risk factor for renal function alteration in healthy smokers and is characterized by a high eGFR and a high urinary protein associated with an increase in the 8-iso-PGF2α and hs-CRP. (Sauriasari R, Sakano N, Wang DH, Takaki J, Takemoto K, Wang B, Sugiyama H, Sato Y, Takigawa T, Takahashi N, Kanbara S, Hitomi Y, Nakamura H, Ogino K. C-reactive protein is associated with cigarette smoking-induced hyperfiltration and proteinuria in an apparently healthy population. Hypertens Res. 2010 Nov; 33 (11): 1129-36.)

Patients with NAFLD have almost all damage endothelial (dysfunction). This damage is known to be correlated with elevated concentrations of 8-iso-PGF2α (Nassar H, Furukado S, Tanaka M, Miwa K, Okazaki S, Sakaguchi M, Mochizuki H, Kitagawa K. The relation between carotid plaque echogenicity and oxidative stress marker 8-iso-prostaglandin F2α. Ultrasound Med Biol. 2012 Mar;38(3):487-91.). Should it be evaluated perhaps?!

In addition, lacking a healthy control group !!!

Minor Essential Revisions

The interpretation (discussion and conclusion) should be reevaluated in the light of these results, as well as any statistical analysis.

Tables are not easily accessible to the reader and should be smplicate and divided.

Discretionary Revisions
• Why the authors not describe patients without METS?

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.