Reviewer's report

Title: Cardiovascular autonomic dysfunction and oxidative stress induced by fructose overload in an experimental model of hypertension and menopause

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Reviewer: Pawan PK.S. SIngal

Reviewer's report:

Summary:
The study examines the adverse effects of fructose overload under the conditions of estrogen deprivation. The experimental animal model comprises of three groups of animals namely hypertensive (H), hypertensive ovariectomized (HO) and the hypertensive ovariectomized submitted to fructose overload (FHO). The authors recorded the arterial pressure, metabolic parameters such as changes in body weight, triglyceride concentration and a reduction in insulin sensitivity. Moreover they correlated fructose overload to a reduction in IL-10 reduction. The findings depict an association of metabolic dysfunctions with defects in cardiac functions in ovarian hormone deprivation.

General comments:
The question posed in this manuscript is well defined and the research adds some knowledge to our current understanding of correlation between estrogen deprivation, cardiac dysfunction and metabolic defects.

The methods used are well described and whatever data are reported is sound. There is no description of work limitations and not much of currently available literature is reviewed. The writing needs extensive revisions to be considered for publication. Following are my major and minor comments:

Major comments:
1] The authors have measured biochemical parameters of oxidative stress. One concern is that the authors have only measured heart rate variability and arterial pressure in this experimental animal model. A study of left ventricular ejection fraction (LVEF), left ventricular volume (LV), which can be easily done by echocardiography (cardiac imaging) in the live animal, would give an index of any related left ventricular dysfunction occurring in estrogen deficiency. This is important to know as cardiac dysfunction leading to cardiac hypertrophy and congestive heart failure are a common problem in menopausal women.

2] There is a generalized problem of separate words typed non-spaced and extra spacing between words.

3] More attention is required in the writing style, particularly in sentence construction errors which are very obvious and too many to single out. Thus a proofreading by a colleague experienced in English would help.
Minor Editorial comments:
Line 81, Pg 4: “In this study, we assessed.”
Line 96, Pg 4: “The consumption of chow and water (with or without fructose) was measured weekly.”
Line 233, Pg 11: “Heart rate has a considerable variability as a tool.”
Line 239, Pg 11: “Moreover-------------------------------- baroreflex sensitivity [5].”

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

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

Declaration of competing interests:
I declare that I have no competing interests.