Reviewer’s report

Title: Inter and intra-reliability of ultrasonography for the measurement of abdominal subcutaneous & visceral adipose tissue thickness at the 12 weeks gestation

Version: 0 Date: 15 Jul 2019

Reviewer: Maria Pilar Aparisi Gomez

Reviewer's report:

Thank you very much for your submission

This is a study of intra and inter-observer reliability on the acquisition of adipose tissue thickness in women at 12 weeks of gestation.

The study is well presented, brief in extension.

Whereas consolidated evidence exists regarding this topic in general population, studies in pregnancy are scarce.

This study aims to contribute to the development of better described stratification of risks in pregnant women, to solve the potential imperfections in assessment of BMI as a tool to stratify risk.

It would be recommended to elaborate on why the determination of fatty tissue thickness can be specifically relevant in women in first trimester of pregnancy, and more generally through pregnancy, especially considering its transient nature - This is only briefly addressed in the discussion. It would be recommended to briefly expand the mention of this: (line 153) "The link between metabolic health and adiposity in pregnancy is currently a fertile ground of research" - would be recommended to present some examples.

Also, this could be briefly addressed in the introduction, to give a clearer idea of the purpose of the study.
A limitation to the relevance of this study is that in its design the population of women selected are in their 12th week of gestation. At this stage of pregnancy, even though some physiological changes are established, changes in body composition are more likely to be qualitative than quantitative. In this respect, the assessment of body composition achievable with US at 12-week gestation is very likely to be comparable with baseline body composition (baseline measurements of thickness of these compartments), and in that respect, practically the same that they would be in standard non-pregnant population. Inter and intra reliability for the measurement of subcutaneous and visceral adipose tissue thickness on ultrasound in a baseline status has already been determined. To add validity to your study, it would be recommended to explain how your results compare to published evidence, and potentially elaborate on the factors that could modify these parameters in pregnant women at this gestation.

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?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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