Reviewer's report

Title: The life expectancy of patients with metabolic syndrome after weight loss: study protocol for a randomized clinical trial” (LIFEXPE-RT)

Version: 0 Date: 13 Feb 2019

Reviewer: Ana Terleira

Reviewer's report:

The authors carried out a clinical trial to evaluate the change of telomere length in patients with metabolic syndrome. The causal relationship of obesity and telomere length remains open. Controlled longitudinal studies are needed to investigate this issue. However, there are some considerations that must be reviewed by the authors.

1. The writing should be improved. There are several mistakes as therd instead of third, and it is better to say withdrawal criteria instead of "Exit criteria", point of view, instead of standpoint, possible profits instead of risk and benefits.

2. The reference number 9 is incomplete

3. There is ambiguous information regarding the purpose of study and the primary outcome. The abstract and the study aim state, as objective, the change of telomere length. But the primary outcome is the change of body mass index. From this reviewer’s point of view the primary outcome should be the change of telomere length. The authors should justify the primary outcome chosen.

4. In secondary outcomes a definition of improved or resolved for the different comorbidities should be included.

5. It is unknown if the patients' follow up will be carried out by the surgeon or a nurse or other physician. An specifically the group 3, is it in charge of endocrinology, surgery?

6. In the headline background, the authors state that "metabolic surgery is best option for treating type 2 diabetes". But this comment cannot be considered in this way. Rubino et al, which is reference for that observation, in a recent publication state that "metabolic surgery should be recommended to treat T2D in patients with class III obesity (BMI ≥40 kg/m2) and in those with class II obesity (BMI 35.0-39.9 kg/m2) when hyperglycemia is inadequately controlled by lifestyle and optimal medical therapy. Surgery should also be
considered for patients with T2D and BMI 30.0-34.9 kg/m if hyperglycemia is inadequately controlled despite optimal treatment with either oral or injectable medications. These BMI thresholds should be reduced by 2.5 kg/m for Asian patients.” So the authors should justify or remove the sentence in the article and add an explanation regarding if the patient population included in the study is inadequately controlled despite optimal treatment for their diabetes, hypertension and lipid disorder.

7. It is unknown the number of patients included in the study. A justification should be included.

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