Reviewer's report

Title: B vitamins related to homocysteine metabolism in adults celiac disease patients: a cross-sectional study

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Reviewer: Sergio De Marchi

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The study by FLavia Xavier Valente et al. has the objective to assess the nutritional status and serum concentration of vitamins B6 / B12 and folate in celiac patients on gluten free diet. The authors analyse a group of 20 patients on a GFD for at least 6 months and conclude that the folate concentration is lower than that of controls and intake of folate is below the EAR.

This is an interesting study, well drawn and described; the small sample is an evident limitation and some lacks of difference between groups could be changed with a greater sample.

Some essential revisions can be done:
1. Why 39 controls were selected (20 patients enrolled)?
2. The unbalanced proportion of males and females could have some consequences and perhaps a balance of sexes should be more appropriate.
3. Were the measurements and collection/analysis of data done in blind manner?
4. Avanutri software is validated? More details should be given and possibly references should be cited in the text.
5. More data about pressure values, heart rate, glycaemic/ lipidic profiles might be of importance regarding nutritional status of subjects; if available should be reported.
6. Clinical history of volunteers were all negative? E.g. no thyroid pathology or autoimmune disease?
7. Some comments about higher number of females in the groups should be done, in particular with reference to a more appropriate adherence to diet or a different approach to alimentary behaviour; haemoglobin is around 13 mg/dl in both groups even if young females are the majority.
8. I think that 6 months could be a relatively short period for a complete normalization of absorption mechanisms; authors make some comments, but a 12 months-period actually may be a better choice – some more comments are welcome.

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 that I have no competing interests.