Reviewer's report

Title: Small-bowel mucosal changes and antibody responses after low- and moderate-dose gluten challenge in celiac disease

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Reviewer: Umberto UV Volta

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The present paper investigates small bowel mucosal changes and antibody responses after low- and moderate-dose gluten challenge in celiac disease patients. Both moderate and low amounts of gluten induced small bowel morphological damage in 67% of celiac patients. Antibody seroconversion was observed in 43% of celiac patients studied. This study confirms that low amounts of gluten can cause significant mucosal deterioration in the majority of celiac patients and that celiac disease requires a strict compliance with gluten-free diet.

This is an interesting study with solid conclusions in line with the results obtained.

I have only some minor observations:

1) Results section, page 12 : The Authors state that all the 3 antibodies studied (TG2, EmA and DGP) showed the same antibody titers during gluten challenge. It would be interesting to know which of the 3 antibodies appeared first after gluten challenge.

2) Results section, page 12: Small-bowel mucosal TG2-targeted autoantibody deposits are regarded as a predictor of celiac disease development being found before the appearance of serum TG2 antibodies. Therefore, it sounds strange that they become positive after serum TG2 appearance and the Authors should provide their interpretation for this atypical behavior.

3) Discussion, page 15: The Authors state that celiac serology is not always a reliable means of assessing gluten-induced harm. We agree with this assertion, but it would be interesting to evaluate whether the recently introduced test, DGP, provides some advantage in comparison with TG2 antibodies in this respect.

4) Results, page 10: patients studied were 25, but at 11 line 26 patients are reported : “moderate IgA-deposits were seen in two and faint in four patients. In the remaining 20….” Check please this point.

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

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