

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 61125

**Title:** Patients with functional bowel disorder have disaccharidase deficiency: A single-center study from Russia

**Reviewer's code:** 03661076

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Assistant Professor, Research Fellow

**Reviewer's Country/Territory:** United Kingdom

**Author's Country/Territory:** Russia

**Manuscript submission date:** 2021-01-09

**Reviewer chosen by:** Jin-Lei Wang

**Reviewer accepted review:** 2021-01-10 23:17

**Reviewer performed review:** 2021-01-24 20:47

**Review time:** 13 Days and 21 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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## **SPECIFIC COMMENTS TO AUTHORS**

Comments to Author The overall manuscript presenting the observational study of disaccharidase deficiency in patients suffering from FBD is interesting. The sample size of the study is good, however some details on patients' characteristics as given in the comments will further help to enhance the quality of study. Introduction 1. Reference is needed for the lactase and sucrase studies in adults or children. 2. under overall criteria for patients, correct "mo" to month. 3. Measurement of disaccharidases/carbohydrases Disaccharidase activity was evaluated by the color intensity, as measured with a spectrophotometer at a wavelength of 495 nm, and was indicated in nanograms of released glucose per milligram of tissue per min (ng/ glucose/mg tissue/min). It should be (ng of glucose/mg tissue/min). The method's The estimation of disaccharidases/carbohydrases could have also been determined my using new techniques/assays along with the conventional method of Dahlqvist just to reconfirm and validate the data. (at least for some samples). 4. Need to specify the normal/standard range for intestinal disaccharidases glucoamylase, maltase, sucrase, and lactase. 5. Introduction to the discussion needs slight modification, "These oligomers and monomers, as a nutritious (culture) medium for microorganisms, contribute to small intestinal overgrowth in the l/umen of the small intestine." Modify to give clear message. 6. Overall characteristics of patients Whether the patients were taking any medications during study (such as NSAIDS, Antibiotics, etc) as part of their regular treatment? If yes, the data needs to add, possibly cluster of patients on similar medication could be grouped to see the effect of such medication on Intestinal enzymes level for glucoamylase, maltase, sucrase, and lactase.

## Comments.

1. Reviewer: Reference is needed for the lactase and sucrase studies in adults or children.

Dbar S: view references 5,6,7,12,13,14,15,17,18,19,20,22

2. Reviewer: under overall criteria for patients, correct "mo" to month.

Dbar S: done, please see the article

3. Reviewer: Measurement of disaccharidases/carbohydrases Disaccharidase activity was evaluated by the color intensity, as measured with a spectrophotometer at a wavelength of 495 nm, and was indicated in nanograms of released glucose per milligram of tissue per min (ng/glucose/mg tissue/min). It should be (ng of glucose/mg tissue/min). The method's The estimation of disaccharidases/carbohydrases could have also been determined my using new techniques/assays along with the conventional method of Dahlqvist just to reconfirm and validate the data. (at least for some samples).

Dbar S: corrected the unit of measurement and made adjustments to the method description, please see the article (p7-8)

4. Reviewer: Need to specify the normal/standard range for intestinal disaccharidases glucoamylase, maltase, sucrase, and lactase.

Dbar S: Data are presented as the median (Q1-Q3): glucoamylase - 490 (231.5-699.25), maltase - 887 (854.5-1146), sucrose - 124 (94-210), and lactase - 56 (43-77.25)

Table 3.

5. Reviewer: Introduction to the discussion needs slight modification, "These oligomers and monomers, as a nutritious (culture) medium for microorganisms, contribute to small intestinal overgrowth in the l/umen of the small intestine." Modify to give clear message.

- Dbar S: modified, please see the article (p10-11 modified version «A decrease in the activity of enzymes involved in membrane digestion leads to the accumulation of oligomers and monomers in the lumen of the small intestine. These oligomers and monomers, as a nutritious (culture) medium for microorganisms, contribute to small intestinal overgrowth in the lumen of the small intestine»)
6. Reviewer: Overall characteristics of patients Whether the patients were taking any medications during study (such as NSAIDS, Antibiotics, etc) as part of their regular treatment? If yes, the data needs to add, possibly cluster of patients on similar medication could be grouped to see the effect of such medication on Intestinal enzymes level for glucoamylase, maltase, sucrase, and lactase.
- Dbar S: Overall characteristics of patients added. updated data («A total of 6 (7.3%) patients had associated symptoms with non-steroidal anti-inflammatory drugs (NSAIDs), and 5 (6.1%) with antibiotic therapy », there are no enough data for statistical analysis of these groups)