Reviewer’s report

Title: A comparison of diagnostic tests for lactose malabsorption - which one is the best?

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Reviewer: Antonio Tursi

Reviewer’s report:

This is an interesting study comparing several common tests to diagnose lactose malabsorption. The authors found that the combination H2+CH4 is the best test to diagnose malabsorption.

I mean that this study needs of Major compulsory revisions.

The most weakness is that this report did not consider the statements about this field recently published by the Rome Consensus Conference in APT (Gasbarrini A et al. APT 2009;29(suppl. 1): 1-49). In particular, methodology of the text (e.g. collecting samples, diet before testing, avoiding smoke, etc.) should be performed according to these statements. Moreover, the results should be discussed in light of these Consensus Conference statements. For example, Consensus statement did not find measurement of CH4 currently recommended to improve the diagnostic accuracy of the hydrogen breath test (level of evidence: IIa, strength of recommendation: B). At the same time, It identify that it is useful to evaluate the onset and the severity of symptoms during the tests and up to 8 hours after, to determine lactose intolerance test (level of evidence: IIb, strength of recommendation: B). All the methodology should be therefore performed according to these indications, and the results should be discussed according to these new statements.

Moreover, could be interesting whether the authors discuss better some results (e.g., higher MBI in not-LM subjects) that may influence the symptomatic response, also in light of the different literature’s experiences (see Landau DA et al. J Clin Gastroenterol 2008;42(8):903-9);

Level of interest: An article of importance 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 interest"