Reviewer’s report

Title: Anti-Saccharomyces cerevisiae antibodies (ASCA) are associated with body fat mass and systemic inflammation, but not with dietary yeast consumption: a cross-sectional study

Version: 0 Date: 10 Feb 2017

Reviewer: StellaMay Gwini

Reviewer’s report:

Abstract

Pg 2, line 42: The authors suggest that 'prevalence of ASCA IgG-positivity in obese subjects is linked to the generalized inflammation ...'. Is this the only alternative explanation as the statement seems to suggest? If generalized inflammation is one of many other explanations, indicate so otherwise the statement is misleading.

Introduction

Well written introduction to the manuscript.

pg 5, line 72: Authors refer to '...the previous published one...' but no other previously published study from this group has been clearly stated in the paper. Is this a additional study or analysis to previous work? If so, provide a distinction between this work and previously published work and provide references.

Methods

pg 6, line 97: The authors chose to score tools if at least 50% of questions were answered in the tool. Was this in accordance to the rules of the scoring algorithms presented with the tools? If true, say so and provide references. If not the case, justify your choice of excluding data if 50% missing. For example with the SHQ-6, if only 3 questions out of 6 were answered, would the score of this participant be considered as robust as the score for participants answering all 6 questions. Provide details/results on missingness for each tool.

Lines 98-100 on the same page gives an example for a categorical variable, what of questions with nominal or ordinal data (more than two possible responses)? How were these addressed? Provide references to indicate robustness of chosen methods.

pg 7, line 131: It is not clear from the results section which associations were tested using correlations. Give examples of where this method was used. Also ensure that all the methods used to obtain results have been well described and referenced where necessary.
Results

pg 8, line 149: Provide 95% confidence intervals (CI) for prevalence of high IgA and IgM levels. Also provide in the methods section, how these confidence intervals were obtained.

pg 8, line 152: Authors refer to 'main findings' but it is not clear what these main findings are. Please clarify.

pg 8, lines 157, 159 & 164: Provide 95% CI from the linear regressions and also indicate which are the dependent and independent variables.

pg 8, line 164: Elaborate in the methods section how 'total intake of yeast-containing food' was calculated.

pg 8, line 166-167: The methods section does not provide information on how subgroup analyses were conducted. Provide how the comparisons presented here were conducted. Were they assessed using interaction terms in the regressions or were the data split and estimates calculated separately? If the latter is true, provide methods on how the estimates from the two models were compared.

pg 9, line 173: Define abbreviations

Discussion

Overall comment: The discussion provides information from a number of literature sources, linking ASCA to obesity. However it is difficult from the discussion to establish what the literature says about the relationships investigated in this particular study and how the findings of this study fit in with the rest of the literature. A more coherent discussion would be invaluable. In addition, the results on the prevalence ASCA is thinly discussed and would be helpful if the authors can add information on how this prevalence compares with that observed in other studies or settings.

pg 9, line 181: The authors refer to '...previous publication' but no references of 'THE' previous publication is provided. It would also be useful if the authors provided a summary of the findings from the 'previous study' which are relevant for this paper.

pg 9, line 186: The authors refer to 'obesity' which in this paper was defined on the basis of BMI. However this study did not show significant associations between ASCA and BMI. Therefore revise the statement to reflect the results.

pg 10, line 197: The authors state that their study had 'higher statistical power'. However, the authors do not provide any information on sample size estimation or power analysis that was conducted at study design. Can the authors provide this extra information and provide reasons why they presume their study to have higher statistical power.
Clarify statement as there were no associations between ASCA levels and dietary or permeability measures.

"...high frequency of Asca IgG positivity...". Please clarify 'high' in comparison to which other group?

The results discussed here have not been presented in the paper. Please provide results first in the results section. Could this part of the discussion be related to the results on pg 8, line 163-165? If so, ensure that the two sections use the same terms/descriptions.

Elaborate the statement that starts with "Screening for differences in these parameters..." as it is not clear what it is referring to.

Add additional limitation on the accuracy of the dietary data as the FFQ requests that participants recall over a year and memories of diets a year back may be inaccurate.

The authors mention "...high prevalence of ASCA positivity". What is this in comparison with?

Similar comment to that provided in the abstract.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

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