Author's response to reviews

Title: A pattern of Cerebral Perfusion Anomalies between Major Depressive Disorder and Hashimoto Thyroiditis

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Author's response to reviews:

To:
Editor BMC Psychiatry

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Dear Editor,

Thank you for the reviews on our recent manuscript submitted to BMC Psychiatry. Please find enclosed our revised manuscript entitled "A pattern of Cerebral Perfusion Anomalies between Major Depressive Disorder and Hashimoto Thyroiditis". We found the comments by the two reviewers very helpful and the revised manuscript includes all their suggestions. Below, we have responded to their specific critiques and pointed out the revisions made to the manuscript. We hope that the work is now acceptable for publication.

Reviewer: Carlo Faravelli

1) Critique: The introduction could be effectively shortened in order to be strictly adherent to the research. As a matter of fact, the main purpose of the entire introduction is to justify the first two paragraphs of page 4.

Response: We have significantly shortened the Introduction as suggested.

2) Critique: What is logistic regression does not need to be explained in detail.
Rather, the method of the present regression (see comment to table 4) should be reported.

Response: We have now shortened the explanation for the logistic regression. The method of present regression is also now indicated: Statistical analyses were carried out in two subsequent steps following a logistic regression approach. In both steps, MDD was considered as dependent variable and all possible risk factors as independent variables. First, all possible risk factors were entered simultaneously in a single block. Second, all two-way interactions between the possible risk factors were added. To select significant interactions, we used a backward elimination procedure. All this is now clearly stated in the revised manuscript.

3) Critique: The first world of the paper is an acronym (HT) not defined earlier (but in the abstract)

Response: This is now defined in the text

4) Critique: The revision by a mother tongue editor would render the reading smoother.

Response: The revision has been carefully examined by a native English speaker (who is also an author).

5) Critique: Table 2: as several cells have expected values of less than 5, the authors state to have used the continuity correction. This doesn’t seem to be true.

Response: We have now re-calculated the Fisher's exact test and is included in the revision.

6) Critique: Tables 3, 5, 6, 7: It would be more appropriate a presentation with either Chi², df and p or O.R. and 95% C.I.

Response: The results are now presented with P, O.R and 95% CL. We have also included chi² with Yates' correction and df for Tables 4-6. One table (previously name Table 4) has been eliminated in this revision since the results are now given in the text and a separate table is not necessary.

7) Critique: Table 4: the results of a logistic regression analysis (apparently binary, with MDD 0/1 as dependent variable) should be presented more diffusely. The method of the analysis should be explicit (enter, forward, backward ?). The result table should contain at least B, Wald, OR and either p or (better) Exp(B) confidence intervals.

Response: As indicated above (point 2) we have now included the method of the present regression analysis under the section statistical analysis. As pointed out in #6 above, we have also changed the data presentation (O.R and CL 95% are
Reviewer: Tania Alves

1) Critique: Sample: there are a great age range between subjects. Were data controlled by ageing process? It’s known that ageing process could relate to gray matter loss, and therefore a secondary CBF and metabolism reduction in those same areas. Please comment and contemplate this aspect in discussion.

Response: The point is well taken. We have now discussed this issue under Discussion/Limitations of the study section.

2) Critique: Design: the classification of life time include remitted subjects. How was it controlled? active MDD subjects versus remitted MDD subjects, as well as severity of symptomatology?

Response: We have now discussed this issue under Discussion/Limitations of the study section.

3) Critique: please define the abbreviations when first use in the body of the text, Example, first line the authors start with "HT"

Response: We have now defined this abbreviation.

4) Critique: Second paragraph: I suspect that instead HE it should be written HT.

Response: HE means Hashimoto Encephalopathy as explained in line 3.

5) Critique: Third paragraph: please state the name of the author and publish date of the selected study. Are there other studies with controversial data?

Response: -We have now included this information. The only study we found with somewhat controversial/contradictory data was by Piga and Coll, and we have now discussed this study also in the revised text.