

Reviewer #1:

Scientific Quality: Grade A (Excellent)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (High priority)

Specific Comments to Authors: The authors aimed at reviewing the impact of SARS-CoV-2 infection on neuropsychiatric disorders using various published clinical articles on patients suffering with COVID-19. This topic is remarkably interesting and sheds lights on the possible immune dysregulation of the CNS by SARS-CoV-2 infection especially the long-term effects on COVID-19 patience which could lead to mental health disorders. Specifically, the authors pointed the fact that the explosive cytokine storm associated with SARS-CoV-2 infection could infiltrate the CNS and disrupt the Blood Brain Barrier (BBB) leading to immune cell migration into the CNS and causing further neurological damage. The consequences of this could be traceable to symptoms and signs such as depression, anxiety, mood alterations, psychosis, post-traumatic stress etc. It is also interesting that the authors propose an immunological pathway/mechanism of SARS-CoV-2 infection and neuropsychiatric manifestations. Overall, this mini-review is timely and up-to-date especially looking at the current COVID-19 pandemic and its consequences on the human health. The review is an eye opener to a new direction for studies on neurological manifestation associated to COVID-19. My other comments for corrections are in the manuscript. Please check. Criteria Checklist for New Manuscript Peer-Review 1 Title. Does the title reflect the main subject/hypothesis of the manuscript? Yes 2 Abstract. Does the abstract summarize and reflect the work described in the manuscript? Yes 3 Key words. Do the key words reflect the focus of the manuscript? Yes 4 Background. Does the manuscript adequately describe the background, present status and significance of the study? Yes 5 Methods. Does the manuscript describe methods (e.g., experiments, data analysis, surveys, and clinical trials, etc.) in adequate detail? N/A 6 Results. Are the research objectives achieved by the experiments used in this study? What are the contributions that the study has made for research progress in this field? N/A 7 Discussion. Does the manuscript interpret the findings adequately and appropriately, highlighting the key points concisely, clearly and logically? Are the findings and their applicability/relevance to the literature stated in a clear and definite manner? Is the discussion accurate and does it discuss the paper's scientific significance and/or relevance to clinical practice sufficiently? Yes 8 Illustrations and tables. Are the figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents? Do figures require labeling with arrows, asterisks etc., better legends? Yes 9 Biostatistics. Does the manuscript meet the requirements of biostatistics? N/A 10 Units. Does the manuscript meet the requirements of use of SI units? N/A 11 References. Does the manuscript cite appropriately the latest, important and authoritative references in the introduction and discussion sections? Does the author self-cite, omit, incorrectly cite and/or over-cite references? Yes 12 Quality of manuscript organization and presentation. Is the manuscript well, concisely and coherently organized and presented? Is the style, language and grammar accurate and appropriate? Yes 13 Research methods and reporting. Authors should have prepared their manuscripts according to manuscript type and the appropriate categories, as follows: (1) CARE Checklist (2013) - Case report; (2) CONSORT 2010 Statement - Clinical Trials study, Prospective study, Randomized Controlled trial, Randomized Clinical trial; (3) PRISMA 2009 Checklist - Evidence-Based Medicine, Systematic review, Meta-Analysis; (4) STROBE Statement - Case Control study,

Observational study, Retrospective Cohort study; and (5) The ARRIVE Guidelines - Basic study. Did the author prepare the manuscript according to the appropriate research methods and reporting? N/A 14 Ethics statements. For all manuscripts involving human studies and/or animal experiments, author(s) must submit the related formal ethics documents that were reviewed and approved by their local ethical review committee. Did the manuscript meet the requirements of ethics? N/A

We thank very much the reviewer for his/her useful comments that improved our manuscript and for the time spending in reading it.

Accordingly, we corrected it point-by-point. Please, see comments in tracking mode in the manuscript.

Q: You may want to remove “in” .

A:Removed.

Q: This statement is incomplete. Something seems missing here. the implication of the immune system in COVID-19 on what???

A:Based on the high number of series of cases reported, there is evidence of the implication of the immune system in the pathological mechanism of COVID-19.

Q: An update and a reference would be nice here

A:We have now updated it.

Q: This is repeated. See above

A:We have now corrected that sentence.

Q: The figure is too small and looks pixelated.

A: We have now provided a new figure in a separate ppt file.

Q: How?? Suggestion/recommendation should be included .

A: We have now added some suggestions