

We sincerely thank the peer reviewers for their meticulous, rigorous, and professional review suggestions, and the editor-in-chief for his valuable comments during his busy schedule!

When revising the manuscript, we consulted the RCA database (<https://www.referencecitationanalysis.com/>) to supplement and improve the highlights of the latest cutting-edge research results.

Q1: The grammar mistakes which are not mentioned here are also to be checked and corrected properly.

A1: We examined the entire manuscript word by word according to the suggestions of the peer reviewer, and in addition to revising the areas clearly pointed out by the reviewer, we also revised similar errors in the manuscript that were not pointed out by the reviewers, but there were a few areas that we thought might cause ambiguity if they were revised, so we kept our comments in those areas. The revised contents have been saved in the manuscript. We list below the areas that were not revised and the reasons for not revising them, and we hope that the peer reviewer will criticize and correct them.

1). About “vaccination were” as “vaccination was”;

There are many "vaccination were" in the manuscript, we have changed the sentence "Reduction of HbA1c levels 52 days after vaccination were associated with neutralizing antibody titers and CD4 cytokine increases" as "The reduction of HbA1c levels 52 days after vaccination was associated with neutralizing antibody titers and CD4 cytokine increases."

The two sentences "Side effects after the vaccination were mild and more frequent after the second dose." and "Antibody levels after the second vaccination were comparable in healthy controls and in DM patients, irrespective of glycaemic control." are not revised, because the subjects of the both sentences are plural (Side effects or Antibody levels), the predicate verb should be "were" instead of "was".

2). About “Longitudinal” as “A longitudinal”;

We believe that "Longitudinal" is placed in the "type of study" column of Table 1, which represents the "type" in a broad sense, rather than a specific study in the sentence, so "A" is not added.

3). About "diabetes were" as "diabetes was";

We checked two sentences containing "diabetes were":

i). Being young, female or underweight, and having diabetes were associated with an increased risk of developing grade 3 to 4 adverse reactions after the first dose of the ChAdOx1nCoV-19 vaccine.

ii). Cardiovascular disease and diabetes were associated with lower IgG antibody levels. The first sentence is a juxtaposition of multiple subjects, although each is singular, when juxtaposed, the predicate verb should be in the plural (were). The second sentence is the same.

4). About ". More" as ". For more";

We found only one sentence: More than 65 years, end-stage renal disease, diabetes, and clinical comorbidities of steroid use had a negative effect on the humoral immune response.

Here, "More than 65 years" indicates one of the negative factors affecting the humoral immune response, and is one of several parallel subjects, rather than specifically referring to the specific group of "over 65 years old", so we have changed it to "Being over 65 years, end-stage renal disease, diabetes, and clinical comorbidities of steroid use had a negative effect on the humoral immune response".

5). About "SARS-CoV-2-naive" as "than SARS-CoV-2-navie"

We found a total of two sentences using "SARS-CoV-2-naive":

i). Three studies suggested that participants with previous SARS-CoV-2 infection would have a better antibody response than SARS-CoV-2-naive individuals[28,47,51]. (in the main text)

ii). GMT was significantly higher in participants with past SARS-CoV-2 infection than in SARS-CoV-2-naive individuals. (in Table 3)

In both sentences, "SARS-CoV-2-naive" means "uninfected", and we have checked the relevant literature for such usage[1,2]. If it is changed to "SARS-CoV-2-navie", the meaning is completely changed and there is no such usage.

[1]. Angyal A, Longet S, Moore SC, et al. T-cell and antibody responses to first BNT162b2 vaccine dose in previously infected and SARS-CoV-2-naive UK health-care workers: a

multicentre prospective cohort study. *Lancet Microbe*. 2022-01-01;3(1):e21-e31. [PMID: 34778853 DOI: 10.1016/S2666-5247(21)00275-5]

[2]. Canaday DH, Carias L, Oyebanji OA, et al. Reduced BNT162b2 mRNA vaccine response in SARS-CoV-2-naive nursing home residents. *medRxiv*. 2021-03-22. [PMID: 33791727 DOI: 10.1101/2021.03.19.21253920]

Q2: There are some typing mistakes as well, and authors are advised to carefully proof-read the text.

A2: We performed a thorough spell-check of the entire text, corrected it according to the reviewer's comments, and also corrected spelling errors not mentioned by the reviewer, such as before or after parentheses and extra spaces in sentences.

Q3: Check the abbreviations throughout the manuscript.

A3: We checked and corrected the abbreviations throughout the manuscript as suggested by the reviewer, in addition to DM, T2DM, T1DM, and ACE2 in the text, TIR and TDD in the table are also included. Furthermore, the abbreviation "(RAAS)" was removed because it appeared only once in the article.

Q4: The introduction part appears less informative about the diabetes mellitus and its subsequent health consequences, thus this section should be indicated as detailed to understand the manuscript in clear.

A4: We have added in the INTRODUCTION section: "In addition, hyperglycemic crisis, acute myocardial injury, Guillain-Barre syndrome, and herpes zoster are some of the very rare vaccine-related adverse events that have been reported occasionally."

Little information is available on the impact of the vaccine on the subsequent health of diabetes, as we describe in the "Adverse reactions" section: SARS-CoV-2 is a novel virus in the history of human viruses, and it is too early to observe from just two years how the vaccine affects the life cycle of patients with pre-existing DM, so the effect of the COVID-19 vaccine on the natural course of diabetes is more in the form of observed adverse effects.

Q5: The initial cited with reference in the text should be removed and should be in the author instruction of the journal (For example, reference "Lee HJ et al[63]") and it should also be checked all over the manuscript.

A5: Indeed, as you said, the canonical citation for "Lee HJ et al[66]" in the text should be "Lee et al[66]", and here we did not delete "HJ" in order to distinguish it from the reference "Lee SW et al[32]". Following your suggestion, we have changed "Lee SW et al[32]" to "Lee et al[32]" in the text and checked for similar errors (For example, changed "Wan EYF et al.[93]" to "Wan et al.[93]"), but retained "Lee HJ et al[66]" and "Lee SW et al[32]" in the tables.

We added new references during the manuscript revision, so we updated the order of references (a huge amount of work) and checked all references, and after eliminating duplicate references, all references were listed at the end of the article according to the requirements of the *World Journal of Diabetes*.

Q6: The conclusion seems very simple. All conclusions must be convincing statements on what was found to be novel, impact based on the strong support of the data/results/discussion. Moreover, the authors may also be included the limitation of the present findings for a better understanding of the manuscript.

A6: 1). As the peer reviewer said, indeed, the Conclusion in the Abstract section seems very simple, but this is based on the journal's requirements for manuscripts, which explicitly require that the Conclusion in the Abstract section be no more than 30 words. The conclusion is a high-level summary of the entire content of the article and requires concise language. We have revised it in the manuscript. Besides, in the Highlights section and at the end of the article, we have a relatively rich conclusion.

2). In addition, four limitations are listed in detail in the "Advantages and limitations and future directions" section.

Round 2

Review:

Comments to the author 1. There are some grammatical, alignment and typographical errors noted in the manuscript and it should be thoroughly checked and corrected throughout the manuscript. For example, the word "department" may be as "Department"; "the severity" as "severity"; "nondiabetic" as "non-diabetic".

Response:

Dear Li Li, Science Editor, Thank you very much for your hard work on our manuscript. I have followed your instructions and revised "department" to "Department" in the manuscript and "non-diabetic" to "non-diabetic" in the main text and tables. In addition, for "the severity", we found two sentences:

1. Coronavirus disease 2019 (COVID-19) is one of the current global public health threats and vaccination is the most effective tool to reduce the spread and decrease the severity of COVID-19.
2. Conversely, does vaccination against COVID-19 exacerbate the severity of pre-existing diseases in patients with diabetes? We consulted an English teacher, who pointed out that "the" in the two sentences both indicated the severity of COVID-19 and suggested keeping "the", so we did not change the "the severity" to "severity". Finally, since the automatic editing system has been closed, I can only upload the revised manuscript and the tables to you as email attachments. Thanks again!