

April 26, 2022,

Dear Editor,

Please find attached files of revised manuscript in word format. The revisions have been made according to the suggestions of the reviewer. The point-by-point response to the reviewer's comments is listed below.

**Reviewer:** 06058894

I have read with great interest the manuscript entitled "Changes and significance of retinal blood oxygen saturation and oxidative stress indexes in patients with diabetic retinopathy". The manuscript has delivered important clinical message and should be of great interest to the readers. Research is well conducted, statistics is appropriate and the findings are well detailed. However, some issues have to be addressed:

1. Please add the background description in the abstract;

**Answer:** Thank you. A background has been added into the abstract:

#### BACKGROUND

Diabetic retinopathy (DR) is a diabetic complication that can severely affect the patients' vision, eventually leading to blindness. DR is the most important manifestation of diabetic micro-vasculopathy and is mainly related to the course of diabetes and the degree of blood glucose control, while the age of diabetes onset, sex, and type of diabetes have little influence on it.

2. In the discussion, the authors described that "Due to the characteristics of the disease, the mean age of patients with DR was relatively large, and the age and sex of patients in the control and experimental groups were not better matched." However, based on the results of this study, the mean age of patients in the DR group was  $65.8 \pm 7.0$ ; The mean age of control group was  $64.4 \pm 8.1$ ,  $P=0.201$ . There was also no significant difference in gender between the two groups ( $P=0.274$ ). Why do you say the two groups "not better matched"?

**Answer:** Thank you for your comment. The description has been revised. Now the sentence was read as **“However, it should be noted that the average age of the patients with DR in this study was relatively old, and our sample size was small.”**

**Reviewer:** 06058770

I read the manuscript written by Xiaoli Wang and others with great interest. In my honest opinion, the topic is interesting and the retrospectively studies novel enough to attract the readers' attention. This might provide additional information for clinical diagnosis and treatment of DR. Title: Appropriate. It reflects the main content of the study. Authorship: Is correct. Institutions: are correct. ORCID number: is correct. Abstract: Is a structured abstract according to the required format. In 329 words authors showed a summary of the content of the manuscript. However, the background needs to be supplemented, and results part needs to be more concise.

**Answer:** Thank you. The background has been added to the abstract. The results section has been updated and it's more concise now.

Key words: 4 that reflect the content of the study. Core Tip: In 136 words authors reflect properly aspects that should call attention to the readers. Background: DR is a complication of diabetes and the long-term prognosis for late DR is not optimistic. Many questions still need further investigation. Method: Authors made the detailed description of the investigations. Results: The author clearly presents the data to be observed in the method. Discussion: Authors made a detailed and informative discussion of the results. Illustrations: They show 5 figures and 3 tables with their corresponding legend. All figures and tables are showing clearly making an adequate support of the results. Biostatistics: This work met the requirements of biostatistics. References: The references are quite appropriate to the subject of research. Comments to the author: In this manuscript authors investigate the changes of blood oxygen

saturation and oxidative stress indexes of retinal vessels in patients with DR. Their findings contribute to clinical diagnosis and treatment of patients with DR.

**Answer:** Thank you for approve of our study. No further comments of revision are required by this reviewer.

**Reviewer:** 06058797

Authors discussed an interesting topic about the changes of blood oxygen saturation and oxidative stress indexes of retinal vessels in patients with DR. Overall, the study is very well designed and the results are very interesting. Authors succeed to present their data in a clear way adding information to the existing literature. Therefore, I have no corrections to do and the manuscript can be published unaltered.

**Answer:** Thank you for approve of our study. No comments of revision are required by this reviewer.

### **Comments from the Editor-in-Chief**

I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Diabetes, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before final acceptance, uniform presentation should be used for figures showing the same or similar contents; for example, "Figure 1 Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...". Please provide decomposable Figures (in which all components are movable and editable), organize them into a single PowerPoint file. Please authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are

displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content.

**Answer: (1)** Now, the uniform presentations are used for figures showing the same or similar contents, for example, "Figure 1 Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...". And the figures have been organized in a single PowerPoint file.

**Figure 1 Histograms of retinal artery, venous oxygen saturation, diameters of retinal arteries and veins of two groups of subjects.** **A:** Histograms of retinal artery and venous oxygen saturation; **B:** Histograms of the diameters of retinal arteries and veins.

**Figure 2 Histogram of retinal artery, venous oxygen saturation and vein diameters in patients with different diabetic retinopathy stages.** **A:** Histogram of retinal artery and venous oxygen saturation; **B:** Histogram of retinal artery and vein diameters.

**Figure 3 Results of retinal color images of different subjects.** **A:** The control group; **B:** The simple diabetic retinopathy (DR) group; **C:** The proliferative DR group.

**Answer: (2)** The standard three-line tables have been provided. Please find it in the end of the main text of the manuscript.

Thank you again for considering publication of our manuscript in the *World Journal of Diabetes*.

Sincerely Yours,  
Ming Zhang