

Reply to the Reviewer/Editor.

Dear Respected Editor/Reviewer

Good day

Thank you very much for the comprehensive review and the precious time you spent reviewing this study. We did the advised changes and answered the queries. All the changes were marked in red for easy tracking by the reviewer. The manuscript looks much better with these changes, and we tried to improve the language as we could. Thank you again for your precious assistance.

Here we are replying point by point:

Reviewer 1:

This review is on insulin resistance increases in children due to lifestyle changes and the pandemic of obesity. There is an association between obesity in children and adolescents and insulin resistance. Causes of insulin resistance might be both genetic and acquired. Tests of evaluation and available treatment also are discussed.

Our Reply: Thank you very much for your positive comments

Reviewer 2:

1: Authors presented a very well-written review about insulin resistance in children.
1. There are a few small typos throughout the text; those should be checked prior to publication. E.g.:

Page 5, line 2: "between 3.1 and 44%. of"

Our Reply: Correction was done and highlighted in red

1.2. Page 9, line 2: Pluss -> Alongside??

Our Reply: Correction was done and highlighted in red

1.3. Page 9, line 8: MD ->DM

Our Reply: Correction was done and highlighted in red

1.4. Page 13, line 16: stock -> stroke?

Our Reply: Correction was done and highlighted in red

1.5. Page 15, lines 8-17: IGF-I = IGF-1??

Our Reply: It can be written in both forms. Correction was done through the whole manuscript

1.6. Page 19, line 16: good history -> good medical history

Our Reply: Correction was done and highlighted in red

1.7. Page 27, line 28: DH -> DM ??

Our Reply: Correction was done and highlighted in red

2. Page 10, lines 12-22: should be merged as a singles paragraph

Our Reply: Merging and paragraphing were done.

3. Why was insulin written with italic style in a few sentences at the beginning of the article?

Our Reply: Corrections were done throughout the manuscript

Similarly, a few expressions were highlighted with bold style, while others were not (e.g., in the medications section).

Our Reply: Corrections were done throughout the manuscript

Reviewer 3:

It is an exciting review article discussing the current magnitude, implication, diagnosis, and treatment of children's insulin resistance (IR). In the manuscript, the authors stated that IR increases in the pediatric population due to lifestyle changes and pandemic obesity, and there is a broad range of genetic and acquired causes of IR with a variable global prevalence. The manuscript is well-written in English and includes two tables and one figure. The content is directly relevant to the clinical application. There are only some suggestions to correct typographical errors as follows.

1. Since IR is an abbreviation for insulin resistance at the beginning of the article, the authors should use IR throughout their manuscript.

Our reply: The requested changes were done.

2. In "3. SIMPLE SURROGATE INSULIN SENSITIVITY/RESISTANCE INDEXES, " the QUICKI and HOMA formulae should be in a similar measurement unit. For HOMA, the formula should be $[\text{Fasting glucose (mg/dL)} \times \text{Fasting insulin } (\mu\text{U/ml})]/405$ rather than $[\text{Fasting glucose (mmol/litre)} \times \text{Fasting insulin } (\mu\text{U/ml})]/22.5$.

Our reply: The requested changes were done.

3. Non-uniform expression of small and capital letters as noted in the contents of Figure 1. For example, Dietary Intervention, Physical activity, etc.

Our reply: The requested changes in the figures were done.

Editorial Comments

LANGUAGE POLISHING:

Native English-speaker did language polishing

ABBREVIATIONS

The basic rules on abbreviations were strictly followed

EDITORIAL OFFICE'S COMMENTS:

All the editorial instructions were followed in finalizing this manuscript.

On behalf of all authors, we thank editors and reviewers for their support during the publication of this manuscript.

Many thanks

Professor Mohammed Al-Biltagi