PEER-REVIEW REPORT

Name of journal: *World Journal of Diabetes*

Manuscript NO: 84558

Title: Risk and Predictors of Severity and Mortality in Patients with Type 2 Diabetes and Coronavirus Disease 2019 in Dubai

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05466290

Position: Editorial Board

Academic degree: MSc, RN

Professional title: Director, Research Scientist, Senior Lecturer, Senior Researcher

Reviewer's Country/Territory: Qatar

Author's Country/Territory: United Arab Emirates

Manuscript submission date: 2023-03-28

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-04-04 06:15

Reviewer performed review: 2023-04-13 20:45

Review time: 9 Days and 14 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [ ] Anonymous [Y] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

This cross-sectional nested case-control study examined the risk and predictors of severity and mortality in COVID-19 patients with type 2 diabetes (T2D) during the first wave in Dubai. Among 1083 patients, those with T2D were older and had higher BMI, more comorbidities, and complications, leading to longer hospital stays and higher mortality rates. Key risk factors included age, fasting blood glucose, serum troponin, and HbA1C levels. T2D patients had a three-fold higher COVID-19 mortality rate, highlighting the need for healthcare workers to prioritize their management.   The study's methods have several strengths and weaknesses: Strengths: The study was conducted in a large specialized hospital, ensuring adequate resources and expertise. The sample size of 1083 patients was relatively large, increasing the reliability of the findings. A wide range of clinical data and patient characteristics were collected, allowing for a comprehensive analysis. The study followed established guidelines for reporting observational studies (STROBE). A thorough statistical analysis was conducted using appropriate tests for different data types.   Weaknesses: (addressed already by the authors)   The cross-sectional design limits the ability to infer causality or observe

changes over time. Data was collected at a single center, potentially limiting the generalizability of the findings. Random sampling of patients may have introduced selection bias. The study did not consider the impact of different treatment protocols on outcomes. The analysis did not account for potential confounders that may have influenced the relationship between T2D and COVID-19 outcomes.   - The authors could benefited from discussing the findings of this paper https://pubmed.ncbi.nlm.nih.gov/32921708/ - Pleas expand the conclusion

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Peer-review model: Single blind

Reviewer's code: 01221786

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Japan

Author's Country/Territory: United Arab Emirates

Manuscript submission date: 2023-03-28

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-04-18 01:27

Reviewer performed review: 2023-04-27 00:30

Review time: 8 Days and 23 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
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SPECIFIC COMMENTS TO AUTHORS

Alawadi F. and others analyzed 1083 patients with Covid-19 in Dubai of whom 427 were with type 2 diabetes. Within its limitations, this is a carefully performed study containing important information on the timely topic. Comments   1.   It is important to note the relationship between glycemic control and the mortality is not simply the poorer, the glycemic control, the higher, the mortality. The fact strongly indicates hyperglycemia per se may not a vicious factor but some other conditions or a combination of untoward factors are responsible for high mortality in patients with diabetes. Please display your thoughts and considerations. Might be a limitation of cross sectional study?   2.   It is not clear how type 1and type 2 diabetes were distinguished. 3.   Diabetic Keto Acidosis is commonly spelled as Diabeteic ketoacidosisls.

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Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03764754

Position: Peer Reviewer

Academic degree: MD

Professional title: Full Professor

Reviewer's Country/Territory: United States

Author's Country/Territory: United Arab Emirates

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Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [ ] Grade C: Good [Y] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No creativity or innovation

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Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [Y] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
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	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The major weakness of this report is that it does not provide any new information. Its findings are interesting and it could be published as a report confirming known information. The manuscript can be improved by adding a multivariate analysis and clarifying the significance of the biochemical values differing between diabetic and non-diabetic patients, as indicated in my comments to the authors. This manuscript contains evidence supporting the concept that type 2 diabetes mellitus is an important factor contributing to worse outcomes of COVID-19 in Dubai, UAE.   The manuscript is clearly presented.   I have one question about the novelty of its findings, one methodological question, and one suggestion about its composition.   Novelty of the findings: That diabetes mellitus is associated with worse outcomes of patients with COVID-2 infection has been documented universally in studies from several countries including Dubai.   The question that the authors should address is whether this manuscript provides any new information.   Methodological issue: In addition to diabetes mellitus, several demographic, clinical, and laboratory factors known to affect outcomes of various diseases differed between survivors and non-survivors.   In

addition to the Kaplan-Meier analysis of the effect of diabetes on survival, a multivariate analysis, containing all the variables that differed statistically between survivors and non-survivors in Table 2, should be performed to identify the independent predictors of mortality. Composition of the report: The subsection Results in the Abstract states that serum troponin was higher in T2D patients. Serum troponin was not included among the biochemical variables measured in section 2.5 Finally, in table 2, section C: Laboratory measures, all the values measured differed significantly between patients with and without diabetes. It is not clear why serum troponin was selected in the Abstract. I suggest that the authors present in section 2.5 all the laboratory variables measured and either add all the laboratory values that differed in Table 2 in the abstract of present in the text the reason(s) why they chose troponin as a key differing biochemistry.