

PEER-REVIEW REPORT

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Title: Kidney Injury in Corona Virus Disease 2019

Reviewer's code: 03834532

Position: Editorial Board

Academic degree: MBChB, MD, MSc, PhD

Professional title: Professor

Reviewer's Country/Territory: Qatar

Author's Country/Territory: Italy

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Reviewer chosen by: AI Technique

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

Reviewer's report (1): REVIEW: et al., General comment: This is an interesting study addressing the association of COVID -19 with acute kidney injury. Satisfaction: The topic is of great interest to the readers in many specialties. Personally, I enjoyed reading the manuscript and I really appreciate the topic selection which is a state of art and I have to congratulate the authors for giving this effort in this hard time. Title: "Kidney Injury in COVID 19" The title is appropriate, original and reflect the authors intension however, it is not very attractive to the readers at the first glance, I encourage the authors to search for more specific and catchy title 1) Abstract: Concise, expressive and acceptable in the current format. I suggest the following to improve the abstract • ARDS came first as an abbreviation (need to write it) • Core tip: need to have a bitter flow or to come as points 2) Introduction: • The introduction is very short, I think it needs to prepare the reader for the receiving the rest of the knowledge presented by the authors • The authors quoted that ARDS usually followed by AKI, but they should elaborate more if AKI could occur in Covid-19 without ARDS. • The authors should start with describing some numbers related to AKI incidence in Covid-19 and the mortality in this scenario. • The introduction should include something about the pathophysiology as in general. 3) Hypothesis: • It is important for the reader to describe first how the authors define AKI in Covid-19 • The authors propose four main mechanisms for AKI in Covid-19, Hypovolemia, ARDS related AKI, Cytokine storm syndrome and direct viral invasion Also, these are the most common main mechanisms described in the literatures, but other mechanisms could exist as well that need to be adequately described as a review article a) ICU related causes including iatrogenic fluid restriction, high level of positive end expiratory pressure (PEEP), cardiac dysfunction and this is a wide category including left sided heart failure, right sided heart failure, myocarditis, and stress induced cardiomyopathy. The use of nephrotoxic

drugs and this need description of the commonly used drugs. Finally, hemodynamic instability from vasoplegic syndrome and others. b) Miscellaneous mechanisms, due to association of severe cases of Covid-19 with other comorbidities including extremes of age, diabetes, hypertension, and gastrointestinal dysfunction c) Rhabdomyolysis had been reported as an association and sometimes as an initial presentation of Covid-19 and this may lead also to AKI d) ARDS related AKI “The cardio-renal syndrome (CRS” the authors quoted from reference 59-64 this is actually not related to ARDS and needs to come under separate section like “cardiac reasons for AKI” e) The authors stated that “The overall combined effect of this entire process is an inflammatory, cardio depressant, acidotic, volume retaining state with high intrathoracic and intraabdominal pressures resulting in high renal back pressures, decrease and dysregulation of renal blood flow, and severe renal tubular injury.” I do not know whether this comment is quoted from other references as there is no citation or this is the authors comment, if it is a the later it can not come under ARDS reason. f) In the section direct viral invasion the authors stated that “Although hypertension is established as a risk factor for poor prognosis” I think there is new data removing hypertension link to poor prognosis, then the authors have to either mention this or to say hypertension is possibly linked to poor prognosis. g) The authors quoted “Data from middle east respiratory syndrome (MERS), suggested the presence of the virus in the proximal tubular epithelial cells [91]. I think the Covid-19 situation is extremely different from other respiratory viruses , so it is not wise to quote from the MERS in the same context until we have a full understanding of the situation. h) Risk factors, the authors adequately described the risk factors for AKI but again rhabdomyolysis which is not uncommon from the literatures and from the practical points of view was not described , the authors are aware of course that this problem needs to be highlighted as the management will be different from the trends towards fluid restriction which is followed in ARDS towards judged fluid management i)



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Volume management, I think the authors need to know how they can monitor the volume status as the authors adequately described various volume management strategies, the first thing should be monitoring, whether it is enough to manage fluid non-invasively, by semi invasive technique or a complex invasive process is needed. j) Management of COVID 19 in renal transplant recipients, it is interesting to cover this part from the authors k) Conclusion, is very long and needs to be reduced 8) Level of interest: An article of importance in its field 9) Quality of written English: No need for secondary revision 10) Ethical concerns: The author explained the ethical concerns 11) References: a. The references style adequately followed the word Journal of Nephrology guidance. 12) Declaration of competing interests: I declare that I have no competing interests.