# **LETTER TO THE EDITOR**

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# Commentary to "Dosing vitamin C in critically ill patients with special attention to renal replacement therapy: a narrative review"



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## Main text

We have read with interest the manuscript from Honore et al. in *Annals of Intensive Care* about the dose adjustments of vitamin C in critically patients undergoing renal replacement therapy [1]. After a detailed review, we would like to highlight an inaccurate literature review performed in this study that may raise uncertainty in the conclusions of Honore and colleagues.

The authors included in their study the Wu et al.'s case report of a patient with hemolytic jaundice induced by pharmacological dose of ascorbic acid in glucose-6-phosphate dehydrogenase (G6PD) deficiency [2]. This manuscript is used in Honore et al. narrative review discussion to support an important conclusion related to the dose of up to 6 g/day (vitamin C) is not contraindicated in patients with G6PD deficiency [2]. However, the study from Wu et al. was retracted from *Medicine (Baltimore)* journal in 2019 (online: 2019 November 27) [3], because the accuracy or validity of the results is questionable and does not support the hypothesis, making the Wu et al.'s manuscript factually incorrect and inadequate to support Honore et al.'s previous conclusion.

The authors searched for studies and used studies published in 2020, like Fujii et al's study [4], so the retraction

note, published online in 2019 November [3], should be observed.

We conclude that the exclusion of Wu et al.'s study does not probably affect the overall conclusions of Honore et al.'s study, but it affects directly the particular conclusion exposed previously because Wu et al.'s study failed to provide valid scientific evidence.

We recommend to exclude it, but a good and accurate literature review is a key element in high-quality original studies

#### Abbreviation

G6PD: Glucose-6-phosphate dehydrogenase.

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#### Authors' contributions

JMM and IHP has equally contributed in study's conceptualization, methodology, analysis and writing. Both authors read and approved the final manuscript.

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# Availability of data and materials

Not applicable.

# Ethics approval and consent to participate

Not applicable.

#### Consent for publication

Not applicable.

# **Competing interests**

The authors declare no competing interest or any conflict of interest.

Full list of author information is available at the end of the article



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#### References

- Honore PM, Spapen HD, Marik P, Boer W, Oudemans-van Straaten H. Dosing vitamin C in critically ill patients with special attention to renal replacement therapy: a narrative review. Ann Intensive Care. 2020;10:23. https://doi.org/10.1186/s13613-020-0640-6.
- 2. Wu S, Wu G, Wu H. Hemolytic jaundice induced by pharmacological dose ascorbic acid in glucose-6-phosphate dehydrogenase deficiency: a case

- report. Medicine (Baltimore). 2018;97(51):e13588. https://doi.org/10.1097/md.00000000013588.
- Wu S, Wu G, Wu H. Hemolytic jaundice induced by pharmacological dose ascorbic acid in glucose-6-phosphate dehydrogenase deficiency: a case report: retraction. Medicine (Baltimore). 2019;98(48):e18261. https://doi. org/10.1097/MD.000000000018261.
- Fujii T, Luethi N, Young PJ, Frei DR, Eastwood GM, French CJ, et al. Effect
  of vitamin C, hydrocortisone, and thiamine vs hydrocortisone alone on
  time alive and free of vasopressor support among patients with septic
  shock: the vitamins randomized clinical trial. JAMA. 2020. https://doi.
  org/10.1001/jama.2019.22176.

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