

Switching to another antihypertensive effective drug when using ACEIs/ARBs to treat arterial hypertension during COVID-19

Michele M. Ciulla  ^{1,2*}

¹Laboratory of Clinical Informatics and Cardiovascular Imaging; and ²Department of Clinical Sciences and Community Health, University of Milan, Milan, Italy

This Commentary refers to: ‘SARS-CoV2: should inhibitors of the renin–angiotensin system be withdrawn in patients with COVID-19?’, by G.M. Kuster et al., doi:10.1093/eurheartj/ehaa235.

I appreciated the well-argued paper by Kuster et al; however, it seems that the authors forget that, at least to treat arterial hypertension, we have the possibility to choose other effective drugs such as calcium channel blockers, an antihypertensive master class.² Indeed, even if there are no data supporting a causal relationship between angiotensin-converting enzyme 2 (ACE2) activity and COVID-19-associated mortality, we should not underestimate the way in which SARS-CoV-2 enters the cell that is well documented with an entry risk map, based on expression of ACE2 that, coincidentally, follows the initial clinical presentation of COVID-19.³ Furthermore, data updated on 20 March from the Italian Health Institute on a sample of 3200 deaths⁴ support: (i) a high mortality rate for elderly subjects (mean age 78.5, median 80, range 31–103, IQR 73–85); (ii) high co-existence of comorbidities (98.7% have ≥ 1 comorbidity); (iii) high blood pressure as the prevailing comorbidity since 73.8% of the

subjects were hypertensives; and (iv) use of ACEIs/ARBs documented in 52% of deaths. We don't know if this is merely a coincidence and we do not have data on patients affected by COVID-19 that are receiving ACEIs/ARBs and their relative mortality rates in China; nonetheless, if we exclude subjects with heart failure and/or ischaemic heart disease, what would be the reason not to switch to another drug to treat high blood pressure, obviously, without destabilizing blood pressure control?

Conflict of interest: none declared.

References

1. Kuster GM, Pfister O, Burkard T, Zhou Q, Twerenbold R, Haaf P, Widmer AF, Osswald S. SARS-CoV2: should inhibitors of the renin–angiotensin system be withdrawn in patients with COVID-19? *Eur Heart J* 2020;doi: 10.1093/eurheartj/ehaa235.
2. Esler M, Esler D. Can angiotensin receptor-blocking drugs perhaps be harmful in the COVID-19 pandemic? *J Hypertens* 2020;doi: 10.1097/HJH.0000000000002450.
3. Zou X, Chen K, Zou J, Han P, Hao J, Han Z. Single-cell RNA-seq data analysis on the receptor ACE2 expression reveals the potential risk of different human organs vulnerable to 2019-nCoV infection. *Front Med* 2020;doi: 10.1007/s11684-020-0754-0.
4. https://www.epicentro.iss.it/coronavirus/bollettino/Report-COVID-2019_20_marzo_eng.pdf.

* Corresponding author. Tel: +39 02 55033592, Email: michele.ciulla@unimi.it

Published on behalf of the European Society of Cardiology. All rights reserved. © The Author(s) 2020. For permissions, please email: journals.permissions@oup.com.