Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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MR-proADM has a good ability to predict 28-day mortality in critically ill patients with SARS-CoV-2 pneumonia: Beware of some potential confounders!

We read with great interest the article by van Oers et al. who conclude that baseline and serial mid-regional proadrenomedullin (MR-proADM) had a good ability to predict 28-day mortality in critically ill patients with SARS-CoV-2 pneumonia [1]. Indeed, MR-proADM was 1.88 for survivors and 1.01 nmol/L for non-survivors ($p = 0.001$) [1]. We would also like to highlight the validity of MR-proADM measurements during continuous renal replacement therapy (CRRT) [2]. Indeed, when looking at Table 1 with the characteristics of patients with SARS-CoV-2 pneumonia with regards to survival up to 28 days, we see that CRRT is used in 5.3% of the survivors versus 14.7% of the non-survivors and even though p value was 0.06, CRRT was used three times more in the non-survivor group [1]. MR-proADM molecular weight (MW) is between 4 and 5.5 kDa [3], and, therefore, it may also be removed by CRRT. Indeed, Mueller et al. showed a significant decrease in MR-proADM (45–65%) if a high-flux membrane was used (with a cut-off of 35,000 Da) [4]. This cut-off is similar to what is used in contemporary CRRT membranes [5]. Hence, among CRRT patients plasma levels of MR-proADM could be falsely low due to elimination by CRRT. Also, as CRRT was seen to be used three times more in non-survivors (14.7%) versus non-survivors (5.3), the level could be artificially lower due to removal by CRRT. Knowing that the difference between survivors and non-survivors was quiet small (1.88 in survivors vs 1.01 nmol/L in non-survivors, it stands to reason that CRRT, which is most frequently used in the non-survivors, could have artificially lowered the level of MR-proADM. With no doubt, this could be seen as a potential confounder in this study and could put the results somewhat in balance.

Author's contributions

PMH,SM, SR, DDB designed the paper. All authors participated in drafting and reviewing. All authors read and approved the final version of the manuscript.

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Competing interests

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