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.

International Journal of Cardiology 332 (2021) 238

Contents lists available at ScienceDirect

International Journal of Cardiology

journal homepage: www.elsevier.com/locate/ijcard

Letter to the Editor

Reply to: Assessment of administering antithrombosis in COVID-19 patients with acute hypoxemic respiratory failure

Marco Schiavone [a,1], Alessio Gasperetti [a,1], Cecilia Gobbi [b], Mattia Busana [c], Giovanni B. Forleo [a,*]

[a] Cardiology Unit, ASST Fatebenefratelli Sacco, Luigi Sacco University Hospital, Milan, Italy
[b] Cardiology Unit, Saint Martin Private Hospital Center, Caen, France
[c] Department of Anesthesiology, Emergency and Intensive Care Medicine, University of Göttingen, Göttingen, Germany

We would like to thank Wang et al. [1] for their interest in our study: "*Oral anticoagulation and clinical outcomes in COVID-19: An Italian multicenter experience*" [2]. Coagulation derangements, mostly seen as venous or arterial thromboembolism, have been associated with poor outcomes in COVID-19 and by now are considered as a common manifestation of this disease, along with cardiovascular involvement [3]. Indeed, an actual COVID-19 induced coagulopathy has been identified, including an early local hypercoagulable state followed by a cytokine storm. This response may trigger an inflammatory response leading to endothelial damage and subsequently to macro and microthrombosis, especially among the most critically ill. Hence, we agree with the authors that anticoagulation (AC) in severe COVID-19 patients may provide a relevant clinical benefit to prevent or treat thrombotic events, as elsewhere highlighted [4]. Moreover, we agree that heparin treatment should always be considered when D-dimer levels or fibrin equivalent units are higher, since this finding may anticipate potentially catastrophic thrombotic events [3]. Whenever possible and until further evidence is available, we believe that switching from oral AC to heparin (when another AC indication coexists) is the safest and most effective way to treat COVID-19 coagulopathy in moderate and severe patients. Nevertheless, it should always be highlighted that AC therapeutic regimens might be associated with a non-negligible burden of unpredictable hemorragic events, even in the absence of overt contraindications. Therefore, waiting for definite evidence from ongoing randomized clinical trials comparing different AC regimens [5] is mandatory before adopting this strategy as standard treatment in COVID-19.

Declaration of Competing Interest

The authors report no relationships that could be construed as a conflict of interest.

References

[1] P. Wang, R. Wang, J. Tang, et al., Assessment of administering antithrombosis in COVID-19 patients with acute hypoxemic respiratory failure, International Journal of Cardiology (2021) https://doi.org/10.1016/j.ijcard.2021.02.049 In press, IJCA 29344.
[2] M. Schiavone, A. Gasperetti, M. Mancone, et al., Oral anticoagulation and clinical outcomes in COVID-19: an Italian multicenter experience, Int. J. Cardiol. 323 (2021) 276–280, https://doi.org/10.1016/j.ijcard.2020.09.001.
[3] M. Schiavone, C. Gobbi, G. Biondi-Zoccai, et al., Acute coronary syndromes and Covid-19: exploring the uncertainties, J. Clin. Med. 9 (6) (2020 Jun 2) 1683, https://doi.org/10.3390/jcm9061683.
[4] A. Flaczyk, R.P. Rosovsky, C.T. Reed, B.K. Bankhead-Kendall, E.A. Bittner, M.G. Chang, Comparison of published guidelines for management of coagulopathy and thrombosis in critically ill patients with COVID 19: implications for clinical practice and future investigations, Crit. Care 24 (1) (2020) 559, https://doi.org/10.1186/s13054-020-03273-y.
[5] T. Tritschler, M. Mathieu, L. Skeith, et al., Anticoagulant interventions in hospitalized patients with COVID-19: a scoping review of randomized controlled trials and call for international collaboration, J. Thromb. Haemost. 18 (11) (2020) 2958–2967, https://doi.org/10.1111/jth.15094.

* Corresponding author.
E-mail address: forleo@me.comf (G.B. Forleo).
[1] These authors contributed equally to this manuscript.

https://doi.org/10.1016/j.ijcard.2021.03.009