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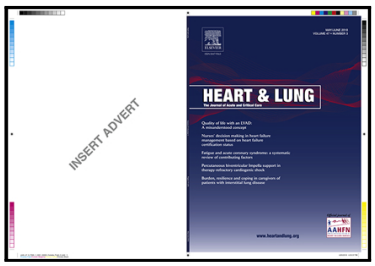

Comment on: "Pattern of anticoagulation prescription for patients with Covid-19 acute respiratory distress syndrome admitted to ICU. Does it impact outcome?"

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The article by Nadeem et al. entitled “Pattern of anticoagulation prescription for patients with Covid-19 acute respiratory distress syndrome admitted to ICU. Does it impact outcome?” has been read with great interest. Although it is a very interesting article, some pertinent points merit attention.

Nadeem et al’s study involved 149 patients and, interestingly, they noted that in their cohort no patients had any documentation of DVT or PE. This, I think, is the principal finding of their study, which corroborates other previous studies. The reported finding by Nadeem et al – that varying patterns of anticoagulation did not affect 28-day survival – must be interpreted with caution because it is quite possible that the 28-day survival could have been worse in the absence of varying doses of anticoagulation. Also, the patients who received such varying doses were most likely sicker (based on the characteristics in table 2) and the clinicians involved with their care adjusted anticoagulation doses based on parameters such as D-dimer, fibrinogen, ferritin, PT, and APTT (some of these parameters absent in table 2). In a similar light, the rate of new DVT and PE could have been higher in the very sick patients in the absence of anticoagulation dose adjustment. The only way to arrive at a more substantiative conclusion would be to wait until randomized controlled trials are completed, which we all hope will not be a long time from now.

Also, as the authors stated, the sample size of their study is a major limitation. As shown in table 3, there was an overall favorable outcome when “therapeutic” or “initially preventive then therapeutic” dosing strategies were used when compared with “preventive dose”, though statistical significance was not reached. With a larger sample size, one can speculate that statistical significance will be attained. Lastly, the authors need to justify why 28-day survival was chosen as the duration.

Our knowledge of COVID-19 continues to evolve as more light continues to be shone by ongoing research. COVID-19 associated coagulopathy is a major aspect of the disease that has received widespread attention, and it remains an aspect that continuously warrants new research because significant morbidity/mortality is related to complications resulting from widespread aberrant coagulation in both the arterial and venous systems **[1]**. Because of this, current general guidelines stipulate that, barring absolute contraindications, prophylactic anticoagulation should be administered to hospitalized patients. Also, serum levels of D-dimer, fibrinogen, and parameters such as PT and APTT have been used to guide anticoagulation treatment. In fact, these parameters have been established to correlate with morbidity/mortality **[2, 3]**. Therefore, anticoagulation has been shown to improve morbidity/mortality **[4]**; the question that remains at large is whether therapeutic doses of anticoagulation have morbidity/mortality benefits. Randomized controlled trials are ongoing and the hope is that our patience will be rewarded as we wait on these well-designed studies to be completed **[5]**.

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