

Letter to the Editor: The Role of D-Dimers in the Initial Evaluation of COVID-19 [Letter]

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Dear editor

I would like to applaud the authors on this original research into the role of D-dimers and other parameters that constitute the risk profile for severe COVID-19 evolution.¹ At this difficult time, research into the virus itself has been crucial in the effort to fight the global pandemic.

Firstly, I would like some clarity on the inclusion criteria for this study. The authors state the initial criterion to include patients with “moderate or severe” forms of COVID-19 but there are no specifics as to how this is determined, for example, decision by senior medical clinician, as per WHO definitions, as per hospital protocol, etc.

Secondly, I commend the broad number of parameters that have been identified and analysed for statistical significance to determine unfavourable evolution of COVID-19. One other common parameter that may have been overlooked is the acute phase reactant, ferritin. Systematic review and meta-analysis by Cheng et al showed that high ferritin was associated with disease severity and higher mortality.² Another less common and more expensive test is for procalcitonin levels. This is routinely tested for in our local Emergency Department in suspected COVID patients, but more often in critical care settings. Studies have suggested that elevated procalcitonin levels are likely due to concurrent superimposed bacterial infection, which in combination with COVID-19 produce more severe disease evolution.³ I appreciate routine testing for procalcitonin might not be facilitated across a number of healthcare settings and countries. However, it would have been interesting to see if the data from your study was comparable with other study findings. Results of these parameters could have added to the data sets in subsequent systematic review and meta-analysis by peers.

Finally, while D-dimer may be used to predict disease severity, prior to the pandemic we know it was used primarily as a rule in/rule out test for venous thromboembolism, including pulmonary embolism (PE). We know that there is an association between PE and higher disease severity.⁴ Roncon et al identified that Computer Tomography Pulmonary Angiogram (CTPA) was rarely used in patients hospitalised with COVID-19, and that this likely resulted in underestimation of PE cases. Several signs and symptoms can present in both COVID-19 and PE which makes clinical differentiation difficult. This raises the issue of when is it appropriate to image a patient with a raised D-dimer and COVID-19. Evidence would suggest that there may need to be a push for a lower threshold for CTPA scanning in COVID-19 inpatients. This is an important issue as correctly diagnosing PE should improve patient outcomes, while also reducing the risk of medico-legal challenge. Further research could investigate protocols incorporating D-dimer and other parameters, to stratify patients into risk groups and identify which patients should undergo diagnostic imaging for PE.

Disclosure

The author reports no conflicts of interest in this communication.

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