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Age-adjusted D-dimer cut-off levels to rule out venous thromboembolism in COVID-19 patients

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We read with great interest the manuscript published by Klok and colleagues which highlight important aspects regarding the occurrence of venous thromboembolism (VTE) in patients with COVID-19 infections hospitalized in intensive care unit (ICU) [1]. The investigation reported an higher risk of thrombotic complications in COVID-patients with severe disease hospitalized in ICU. Notably, age-adjusted hazard ratio and coagulopathy, defined, as spontaneous prolongation of the prothrombin time > 3 s or activated partial thromboplastin time > 5 s resulted independent predictors of thrombotic complications. Regarding the venous thrombotic events, no data regarding which type of clinical pre-test probability was used to suspect VTE. Moreover, no data regarding the D-dimer level assessment were provided. It would be interesting to know how the if the D-dimer level was evaluated using a fix or an age adjusted cut-off . Indeed, as reported by other recent investigations and national surveillance programs, the mortality rate as well as the severe forms of COVID-19 pneumonia increase with aging [2]. For these reasons, it seems reasonable to prefer the adoption of an age-adjusted cut-off in these subjects. Moreover, It has already been demonstrated by several studies and meta-analysis that the age-adjusted threshold can reduce the need for imaging tests compared to a fixed cut-off [3-8]. This aspect could be very useful in COVID-19 subjects, limiting the need for CUS and/or to transfer an infectious patient to the radiology ward to perform an unnecessary computed tomography pulmonary angiography (CTPA) to exclude PE. Further studies are needed to assess the clinical features and prognostic implications of VTE in COVID-19 patients to further improve their thromboprophylaxis and diagnostic management. However, the VTE is emerging as an important complication in COVID-19 patients that must be not underestimated.

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