

Cardiovascular Considerations for Patients, Health Care Workers, and Health Systems During the Coronavirus Disease 2019 (COVID-19) Pandemic

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Venous thromboembolic disease.

COVID-19 infected patients are likely at increased risk venous of thromboembolism (VTE). Though there are no published case series thus far, there are reports of abnormal coagulation parameters in hospitalized patients with severe COVID-19 disease (59,60). In a multicenter retrospective cohort study from China, elevated D-dimer levels (>1g/L) were strongly associated with in-hospital death, even after multivariable adjustment (OR 18.4 95% CI 2.6-128.6, p=0.003) (6). In another study comparing COVID-19 survivors to non-survivors, non-survivors had significantly higher D-dimer and fibrin degradation products (FDP) levels and 71.4% of non-survivors met clinical criteria for disseminated intravascular coagulation (DIC) during the course of their disease (59). In addition to DIC, critically ill patients with prolonged immobilization are inherently at high risk for VTE. Vascular inflammation may also contribute to the hypercoagulable state and endothelial dysfunction in such patients. In the setting of critically ill COVID-19 patients who demonstrate clinical deterioration as evidenced by hypoxia or hemodynamic instability, thromboembolic disease should be considered. The optimal thromboprophylactic regimen for patients hospitalized with COVID-19 related illness is not known. As such, contemporary guideline endorsed strategies should be observed (61). Given the drug-drug interactions between some antiviral treatments and direct oral anticoagulants, low molecular weight heparins, or unfractionated heparin with or without mechanical prophylaxis are likely to be preferred in acutely ill hospitalized patients.