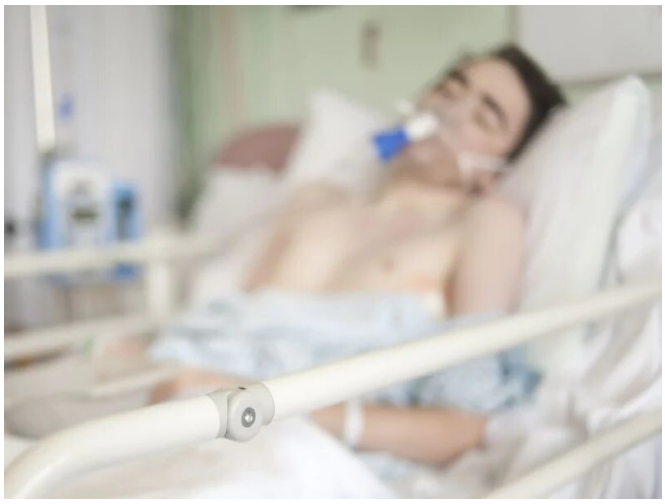
Thromboelastography can predict blood clots in COVID-19

10 June 2020



(HealthDay)—Hypercoagulable thromboelastography (TEG) can predict thrombotic events in patients with COVID-19 in the intensive care unit (ICU), according to a research letter published online June 5 in *JAMA Network Open*.

Jared Robert Mortus, M.D., from the Baylor College of Medicine in Houston, and colleagues conducted a retrospective electronic health record review for 21 patients admitted to the ICU with severe acute respiratory syndrome coronavirus 2 infection. Upon ICU admission, all patients underwent TEG and TEG with heparinase correction.

The researchers found that fibrinogen and dimerized plasmin fragment D levels were elevated in the patients. Nineteen patients (90 percent) demonstrated hypercoagulable TEG, including 14 and five patients with hypercoagulable TEG as defined by fibrinogen activity and maximum amplitude (MA) criteria and with hypercoagulable TEG as defined by MA criteria alone, respectively.

Thirteen patients demonstrated clinical evidence of thrombotic events, with 46 events recorded (range, one to eight events/patient). Innate TEG MA was significantly greater for the high versus the low event-rate group (at least two versus fewer than two events: 75 versus 61 mm). Elevated MA was seen in 100 percent of patients in the high event-rate group versus 45 percent in the low event-rate group. Sensitivity and negative predictive value were both 100 percent for innate TEG MA.

"The TEG test should be performed on all COVID-19 ICU patients immediately to find those who are at a higher risk of clotting," a coauthor said in a statement.

Two authors disclosed financial ties to the biopharmaceutical industry; one author holds a patent.

More information: Abstract/Full Text