Full-dose blood thinners decreased need for life support and improved COVID outcomes

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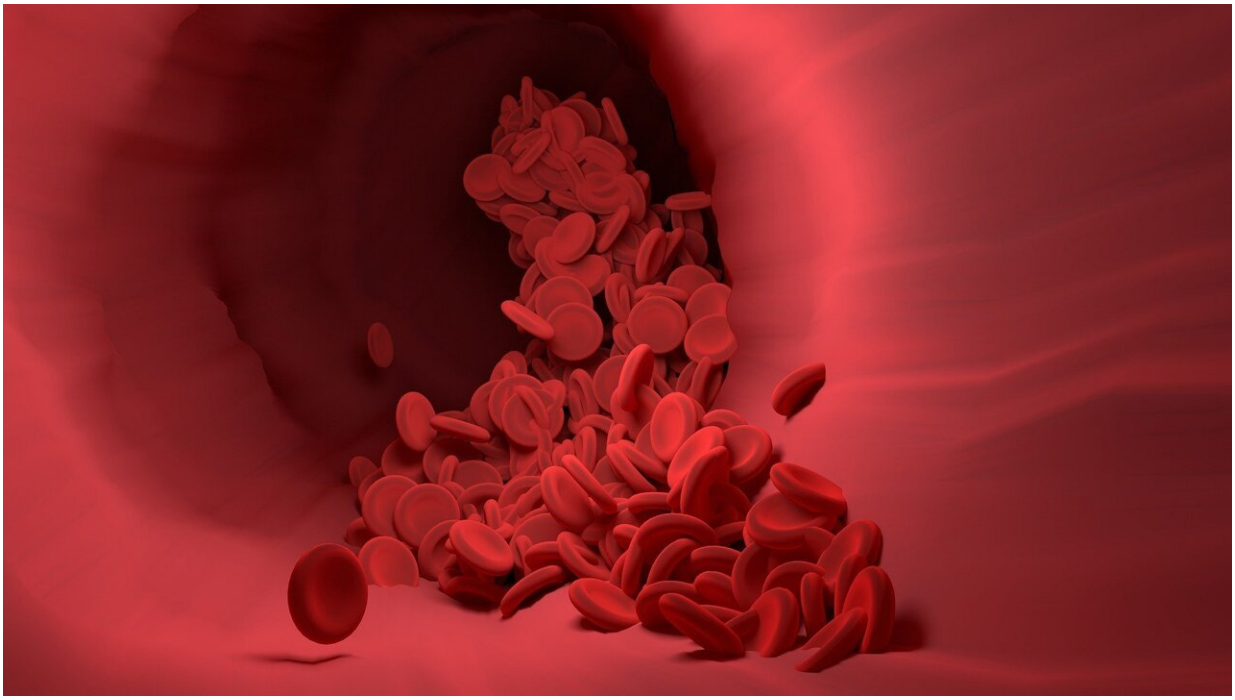

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Full-dose anti-coagulation (blood thinner) treatments given to patients hospitalized for COVID-19 reduced the requirement of vital organ support in a large clinical trial conducted worldwide. With large numbers of COVID-19 patients requiring hospitalization, this treatment is expected to reduce the pressure in intensive care units around the world.

Three clinical trial platforms spanning five continents in over 300 hospitals, have been working together since May 2020 to urgently test whether there is a greater benefit of full doses of heparin (blood thinners) to treat adults hospitalized for non-critical COVID-19 illness compared to the lower dose typically administered to prevent blood clots in hospitalized patients.

Based on the interim results of more than 1300 moderately ill patients admitted to hospital, findings showed that full doses of blood thinners were not only safe, but superior to the doses normally given to prevent blood clots in hospitalized patients. Moderately ill patients are those not in ICU and who did not receive organ support such as mechanical ventilation at trial enrollment. The trial investigators are now working as fast as possible to make the full results of the study available so clinicians can make informed decisions about treating their COVID-19 patients.

These trial results reported today complement the group's findings announced in December that routine use of full-dose anti-coagulation when started in the ICU in critically ill COVID-19 patients was not beneficial and appeared to be harmful.

"In a disease with a limited number of effective therapies, our results have the potential to define a new standard of care for moderately ill hospitalized COVID-19 patients around the world," said Ryan Zarychanski, MD, M.Sc., associate professor, hematologist and critical care physician at the University of Manitoba and CancerCare Manitoba, Canada, and chair of the Antithrombotic Therapy to Ameliorate Complications of COVID-19 (ATTACC) platform and of the therapeutic anticoagulation domain of the Randomized, Embedded, Multi-factorial Adaptive Platform Trial for Community-Acquired Pneumonia (REMAP-CAP).

Early in the pandemic, physicians around the world observed increased rates of blood clots and inflammation among COVID-19 patients which affected multiple organs and led to complications such as lung failure, heart attack and stroke. Whether providing increased doses of blood thinners routinely administered to hospitalized patients would be safe and effective was unknown at that time.

"These results are very exciting and lead us to better understand the impact of applying the right therapies at the right time in the course of this challenging disease," said Dr. Judith Hochman, chair of Accelerating COVID-19 Therapeutic Interventions and Vaccines-4 (ACTIV-4) platform, Harold Snyder Family Professor & Associate Director of Cardiology, Senior Associate Dean for Clinical Sciences and Co-Director, NYU-HHC Clinical and Translational Science Institute, NYU Grossman School of Medicine.

Knowing the effect of full-dose blood thinners in hospitalized patients with non-critical disease was a key outstanding question that has now been answered. Most COVID-19 patients hospitalized are non-critical and this study will impact their care and outcomes. The multiplatform trial further paves the way for future collaborations on a global scale.

"These are the first multi-platform international clinical trials ever undertaken and given the rapid discovery of Heparin's positive impact on patient outcomes during the middle of the deadly COVID-19 pandemic, I don't think it will be the last time researchers, clinicians and patients join forces across continents to test potential treatments against any number of diseases," said Patrick Lawler, MD, MPH cardiologist at the University of Toronto and Peter Munk Cardiac Centre at University Health Network, who was co-principal investigator of ATTACC and a member of the international trial steering committee for REMAP-CAP.

"Having cared for so many severely ill COVID-19 patients and witnessed

the suffering involved for patients and their loved ones, it is profoundly gratifying that together we have discovered a treatment that can prevent patients from becoming severely ill and improve their recovery," said critical care physician Ewan Goligher, MD, Ph.D., and co-chair of the therapeutic anticoagulation domain in REMAP-CAP, and assistant professor of medicine, University of Toronto and scientist, University Health Network

Clinical trials, overseen by independent boards, routinely review data. The positive conclusions drawn from results to date at these trial sites have now led to enrollment being stopped. However, an adaptive approach in response to scientific data enables this study, like others, to conduct safe, rapid testing of additional agents and evolve accordingly.

Provided by University of Manitoba

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