Stroke clot-buster drugs could be harnessed to tackle COVID-19

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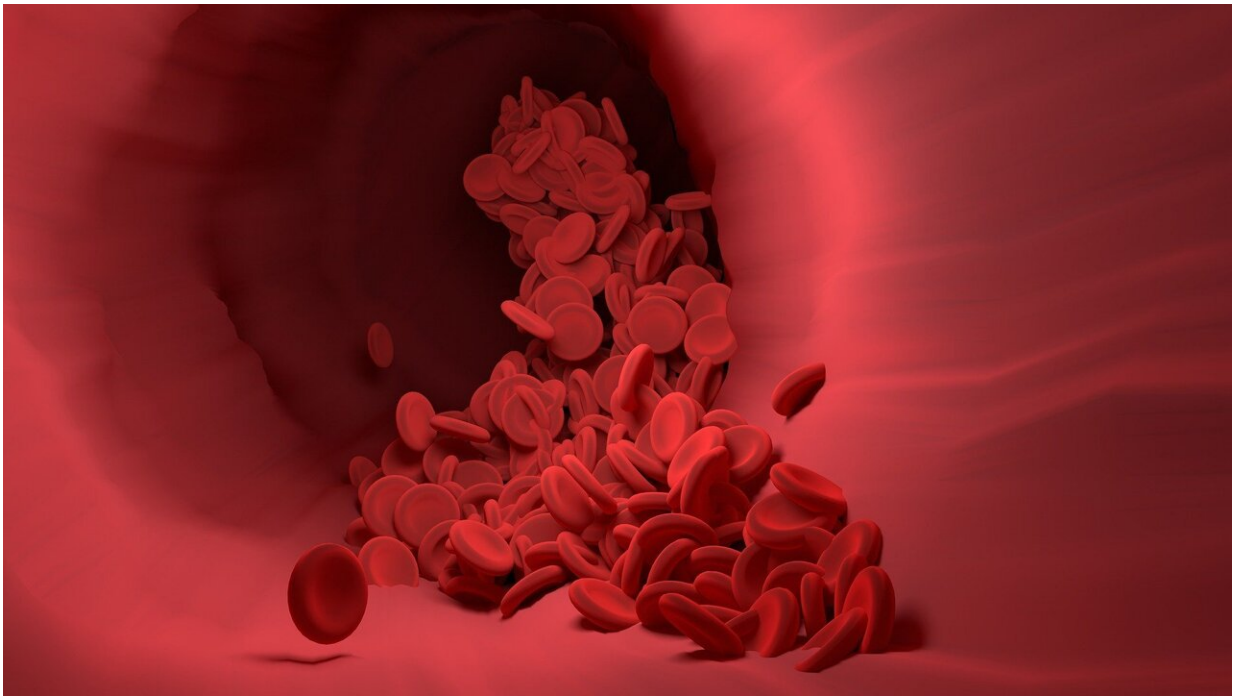

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A drug commonly used to treat patients suffering from strokes could be repurposed to treat patients with COVID-19, according to researchers at the University of Aberdeen.

The paper by Dr. Claire Whyte and Dr. Nicola Mutch from the University's Cardiovascular & Diabetes Centre and Honorary Research

Fellow, Dr. Gael Morrow, has been published in the *Journal of Thrombosis and Haemostasis*, and was funded in part by grants from the British Heart Foundation.

They suggest an aerosol version of a clot-busting drug called tissue plasminogen activator (tPA) could be a 'pragmatic' way to tackle lung injury complications caused by the virus.

Similar diseases to COVID-19, including the common flu, can create inflammation which results in deposits of a protein called fibrin. Fibrin is the scaffold that blood clots are made of.

This build up of fibrin takes up space and reduces the amount of oxygen the lung can take in.

Patients with COVID-19 are prone to forming unwanted blood clots which ultimately increases the risk of death.

Currently the advice is to treat COVID-19 patients with lung complications using medication to prevent unwanted blood clots forming. However, these medications will not help to breakdown clots that have already formed.

In this review article they propose the clot buster drug, tissue plasminogen activator (tPA), which is currently used to treat stroke patients, could be used to target clots that have already formed.

Dr. Nicola Mutch said: "Given the urgent time scale of treating severely ill patients and the current burden on the NHS, repurposing of existing therapies, such as tPA, is a pragmatic approach in addressing the lung injury complications associated with COVID-19."

More information: Claire S Whyte et al. Fibrinolytic abnormalities in

acute respiratory distress syndrome (ARDS) and versatility of thrombolytic drugs to treat COVID-19, *Journal of Thrombosis and Haemostasis* (2020). DOI: 10.1111/jth.14872