Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Testing COVID-19 therapies to prevent progression of mild disease

A randomised controlled trial[1] found no significant benefit of lopinavir–ritonavir over placebo in patients with severe coronavirus disease 2019 (COVID-19). Even though lopinavir–ritonavir might not be efficacious in cases of severe COVID-19, we postulate that similar treatments to these antivirals, which also effectively inhibit viral replication, will be more effective in preventing disease progression if used to treat mild disease than if used to treat severe disease. We encourage randomised trials to assess antiviral drugs for the treatment of mild COVID-19.

Similar to influenza, we propose that antiviral drugs for severe acute respiratory syndrome coronavirus 2 are probably most effective if administered soon after symptom onset, when viral replication is likely to be an important driver of pathogenesis. For example, oseltamivir has shown benefits over placebo in patients with influenza if administered less than 48 h after the onset of symptoms. By contrast, administration of this influenza neuraminidase inhibitor more than 48 h after symptom onset showed no significant benefit over placebo. Likewise, baloxavir, which targets the cap-dependent endonuclease, was more effective when given to patients with influenza within 24 h of symptom onset than when given to patients after 24 h of symptom onset.[2]

For COVID-19, viral load appears to be maximal near the time of symptom onset,[3] providing a rationale for the probable importance of early control of viral replication. Moreover, an analysis of COVID-19 symptom progression indicated that hospitalisation occurs a mean of 5 days after symptom onset, and deterioration to a severe status might occur more than 5 days after symptom onset. Therefore, there is a potential treatment window in which intervention could prevent the progression of disease. Conversely, critically ill patients can show signs of an exuberant inflammatory response,[4] which might not depend on viral replication once initiated. Since severe manifestations of COVID-19, such as acute respiratory distress syndrome, often manifest many days after symptom onset, treatments that are highly effective in controlling viral replication could nonetheless show modest or no benefits in treating severe disease.

Although treatments for severe illness are desperately needed, we should not lose sight of the benefits of early treatments for mild infection that could prevent serious complications. Such an indication, if proven, could reduce requirements for admission to hospital and intensive care units and provide benefit to a large number of people, especially in resource-limited settings, where hospital capacity is already limited and might therefore be unavailable to patients with severe illness. One modelling study[5] suggested that a therapy that reduces progression to critical disease could reduce the need for physical distancing and hasten the development of herd immunity, thereby achieving the same benefits as increased intensive care unit capacity, while preventing more critical cases.

Assessing the prevention of mild disease progression after the initiation of antiviral therapy is a valuable endpoint for clinical trials, but has not been the focus of most studies. The WHO Solidarity trials enrol hospitalised patients, many of whom will have been infected for some time. At the time of writing, we are aware of only one trial focused on mild illness (ClinicalTrials.gov, NCT04307693). We propose that obtaining evidence from randomised controlled trials for the treatment of mild COVID-19 should become an imperative for ongoing research.

ML reports personal fees from Merck unrelated to the submitted work. SP and MKW declare no competing interests.

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COVID-19 in Cameroon: a crucial equation to resolve

On March 6, 2020, the first case of coronavirus disease 2019 (COVID-19) was officially reported in Cameroon.[1] As of April 25, 2020, the number of cases had increased to 1569, with 53 deaths,[2] indicating an exponential growth in the number of cases. Although these numbers already sound shocking, the truth is that they are an underestimation because the diagnostic system for COVID-19 in Cameroon is not robust. Realistic projections in this context suggest approximately 14 000 cases of COVID-19 in the country.

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For more on the **WHO solidarity trials** see https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/solidarity-clinical-trial-for-covid-19-treatments

For more on the **COVID-19 symptom progression analysis** see http://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-8-symptom-progression-covid-19