

14 April 2020

BRIEF19

A daily review of covid-19 research and policy.

RESEARCH BRIEFING

New study questions the safety and efficacy of hydroxychloroquine for covid-19. In a [preprint](#) of a randomized clinical trial posted in *medRxiv*, researchers in Brazil randomized patients to receive either the anti-malarial drug chloroquine (CQ) 600mg twice daily for ten days or 450mg low dose CQ for five days. Compared to low-dose CQ, patients receiving high dose CQ had more adverse cardiac effects (25 percent of patients' hearts began to have abnormally long recovery times between beats, known as a "long QTc interval") and even increased mortality (17 percent). When the researchers compared the patients in this study to those who had not received CQ, fatality rates were similar suggesting that the effects of CQ for covid-19 are negligible. It is important to note that only half of the patients assessed had laboratory-confirmed SARS-Cov-2 infection. The other half had the "covid-19" syndrome, which was not confirmed by labs but, rather, by physicians' suspicion only.

Analysis: This "preprint publication" has not been peer-reviewed by experts. Other considerations: 1) These patients were also taking azithromycin, an antibiotic which, like CQ, is known to increase the QTc interval of the heart. So, the potentially dangerous cardiac side effect of CQ seen here may be synergistic with azithromycin. 2) It is possible that some of the patients without laboratory confirmed SARS-Cov-2 may have had viruses other than SARS-CoV-2. That said, despite some limitations, this is the first randomized clinical trial of CQ. These "negative results" are not unexpected. Randomized trials frequently deliver disappointing results for medications that have "anecdotal evidence showing promise" for a disease. This study casts serious doubt as to the effectiveness of CQ for treating covid-19. Worse, the results of this study provide some evidence that CQ (and its cousin hydroxychloroquine) might be harmful while not offering any help to covid-19 patients. Though many hospitals continue to use these medications, there remains no compelling evidence to support the routine use of CQ or hydroxychloroquine for treating covid-19 infection.

Are chest x-rays reliable for diagnosing covid-19? A [paper](#) published in the *Journal of Urgent Care* looked at chest x-rays of 636 patients with covid-19 presenting to an urgent care center in New York City. The researchers found that nearly 90 percent of patients with confirmed SARS-Cov-2 infection had either normal or mildly abnormal chest x-rays despite having symptoms serious enough to cause doctors to have ordered the x-rays. This study confirms what providers are routinely seeing in emergency departments: a normal chest x-ray does not provide any reassurance that a patient with covid-19 has only mild disease.

Autopsy findings of four patients with covid-19 in New Orleans. A potentially important [preprint](#) recently posted in *medRxiv* describes New autopsies of four New Orleans patients whose deaths were confirmed as being caused by SARS-Cov-2 infection. All four patients were obese and had a history of high blood pressure requiring medications. Three of the patients required insulin for type 2 diabetes. The investigators found that the internal lining patients' arteries within the lungs were damaged resulting in the formation of abnormal clots, a process doctors call "thrombotic microangiopathy." There was also evidence of blood having leaked

from the arteries into the tiny air sacs of the lungs (“alveolar hemorrhage) where oxygen and carbon dioxide are exchanged. Interestingly, there was no detected evidence of SARS-Cov-2 infection in the heart, though there were findings consistent with the right-side of the heart having been overworked. This suggests that the arteries delivering blood from the heart to the lung were under high amounts of pressure, possibly from having to push up against the pressure of blood building up in the air sacs. *--Joshua Niforatos, MD, Research Section Editor.*

POLICY BRIEFING

Who is in charge, here? Yesterday, President Trump issued a tweet [reminding](#) people that it was a federal decision, not a state decision, to determine when to lift shelter-in-place orders and re-open the country for business. However, the Trump Administration first issued shelter-in-place guidelines on March 16th, with a 15-day duration. Those guidelines were later renewed through the end of April. Despite these national orders, state by state adoption has been piecemeal. Florida [waited](#) until April 3rd to issue its stay at home order. The legality of “who decides” remains murky. President Trump believes the decision to re-open the country is his. In reality, these decisions will likely be made by Governors state-by-state. *Wall Street Journal.*

Oyez, oyez, oyez. In a departure from century-old norms, Supreme Court arguments will be available to the public in real time this May. The Supreme Court has long delayed releasing copies of oral arguments to the public. Currently, the [standard](#) is to release audio transcripts at the end of the week of a hearing. However, with covid-19, in person hearings have become impossible, and there are certain time sensitive cases that cannot be delayed much longer. So, the highest court in the land is joining the rest of the world in [embracing tele-work](#). Starting in May the court will hold oral arguments over the telephone. In doing so, they will allow news broadcasters access to the arguments in real time. It is hard to imagine that the public will be satisfied going back to a delayed release after a taste of real-time arguments. *New York Times.*

Hold the swab. The Food and Drug Administration has [granted](#) emergency use authorization for a new type of coronavirus testing using saliva, developed by scientists at Rutgers University. Up to 10,000 tests per day can be run and the technology eliminates use of collection swabs which are in short supply nationwide. The higher volume of collected bodily fluid may increase sensitivity, and less PPE will be needed, the developers believe, as health care workers will not need to collect nasopharyngeal swabs. That said, the CDC declared swabbing to be “non-aerosolizing” earlier in this pandemic, so full PPE is not strictly required for nasopharyngeal swabs. However, many people believe that swabbing *is* aerosolizing and feel that the CDC guideline reflects PPE shortages more than a full reckoning of the actual risks. If true, then there would be a lower risk of viral transmission to health care workers with a saliva sample compared to a nasopharyngeal sample. *CNBC.* *--Kimi Chernoby, MD JD, Policy Section Editor.*

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Brief19 is a daily executive summary of covid-19-related medical research, news, and public policy. It was founded and created by frontline emergency medicine physicians with expertise in medical research critique, health policy, and public policy.