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Letter to Editor

Widespread Use of Hydroxychloroquine and Chloroquine Amid COVID-19 Pandemic: A Word of Caution

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Abstract

The COVID-19 is a rapidly spreading illness that demands an urgent treatment option. Recently hydroxychloroquine and chloroquine, have gained widespread acceptance against COVID-19 despite inconclusive evidence, which has led people to buy them in panic and self-medicate. This letter highlights the consequences of such reckless use of these antimalarial drugs.

Keywords: *COVID-19; Anti-Malarial Drugs; Self-Medication; Side-Effects; Suicide*

As the situation of the newly emergent coronavirus disease 2019 (COVID-19) continues to deteriorate, the world has come together in unprecedented ways to curb the rapidly spreading virus. Various immunomodulatory and antiviral medications have been proposed to manage critically ill patients; however, no specific medicine has been rendered truly beneficial to date.

Recently, hydroxychloroquine (HCQ) and chloroquine (CQ) have gained popularity both as a prophylaxis and treatment option for COVID-19. A non-randomized open-label clinical trial by Gautret., *et al*. showed a significant reduction in viral load of SARS-CoV-2 in COVID-19 patients receiving HCQ at a dose of 600 mg/day for 10-days, with enhanced effects from coadministration of azithromycin [1]. While the results of the study were considered promising by some experts, they were challenged by Rosendaal FR due to some major methodological shortcomings such as inappropriate statistical tests, biased inclusion criteria, and small sample size. Moreover, the lack of long-term follow-up coupled with limited analysis of its clinical benefits, raised some questions [2]. Despite these limitations, misinterpretations of the study portraying antimalarial drugs as a magical cure for COVID-19 spread rapidly through the media. Consequently, these medications soon gained acceptance across the globe as a potential weapon against COVID-19.

The Indian Council of Medical Research (ICMR) also recommended the use of HCQ for chemoprophylaxis among asymptomatic healthcare professionals coming in contact with COVID-19 positive patients. This recommendation was also applicable to close contact with affected persons. While this step has been widely condemned, as a hasty move with the political propensity and little evidence backing, it led people to believe that it will kill the virus. People around the globe, with their judgments clouded by fear and paranoia, began seeking these drugs even at the cost of abuse and overdose. Moreover, their easy availability and cost-effectiveness have motivated people to bulk purchase these medicines. Self-medication with these drugs has become a common practice in areas where they can be purchased over-the-counter without any prescription [3]. If this attitude continues, we fear that it may lead to perilous consequences.

Self-medicating with decades-old antimalarial drugs to ward off COVID-19 is a major concern due to their narrow therapeutic index. Cardiac toxicity with QT prolongation and inhibition of sodium channels may occur with subsequent ventricular arrhythmias and conduction blockade. Moreover, drug-drug interactions and underlying cardiac, hepatic, and renal co-morbidities may increase the risk of toxicity, which may be fatal for a COVID-19 patient [4]. A recent report of a fatality in a 60-year-old Arizona man following ingestion of chloroquine phosphate, an additive present in fish-tank cleaners, as prophylaxis for COVID-19 also supports the argument regarding risks of self-medication [5].

History has warned us about the societal repercussions of such antimalarial medications. The French suicide outbreak in 1982, following a paper, 'Suicide: a how-to guide' that encouraged the use of CQ to suicide, is still remembered by toxicologists worldwide [6]. The ongoing COVID-19 pandemic has cast a detrimental impact on the psychological wellbeing of people all over the world. While uncertainty amid the ongoing pandemic has resulted in increased stress and anxiety in healthy people, it has also worsened the symptoms in those with pre-existing psychological illness. At the end of March 2020, the German finance minister, Thomas Schaefer, committed suicide; authorities reported that he was extremely distressed about the collapsing economy from the COVID-19 crisis [7]. To date, no incident of suicide with the ingestion of CQ has been reported concerning the ongoing pandemic. However, with the widespread acceptance of antimalarials as a potential therapeutic agent against COVID-19, they are easily accessible to depressed individuals. It is, therefore, possible that individuals who have suicidal ideations may see it as an opportunity to use these drugs in fatal dozes, as seen in the past.

Another concern that begs urgent attention is the threat to HCQ and CQ supplies as the demand continues to spike. Donald Trump, the President of the United States (US), has proclaimed HCQ as a 'game-changer' for patients with COVID-19. Following Mr. Trump's statement, prescriptions for HCQ and CQ rose exponentially, with pharmacies experiencing shortages within a day. People have been hoarding heaps of HCQ and CQ to market them at higher rates as well as for personal use. Given the anticipated shortage of malarial pills, the number of patients with systemic lupus erythematosus requesting a refill on these medications has increased [8]. If this trend persists, healthcare authorities are concerned that HCQ and CQ will soon be unavailable to those suffering from conditions requiring them as their sole treatment option. Such circumstances will only burden the already overwhelmed public health system.

We conclude that the consequences of impulsive use of HCQ and CQ could worsen in the coming days. Physicians and laymen should enlighten themselves with existing literature regarding the use of HCQ and CQ against COVID-19. While people should avoid buying drugs they do not need, healthcare authorities should ensure that antimalarial drugs are not dispensed, without a legitimate prescription. Moreover, political leaders and news networks should refrain from endorsing substandard therapies. The results of ongoing randomized, controlled trials should be awaited before the widespread use of these drugs. The outcomes of ongoing trials will be instrumental in establishing the efficacy along with determining the safe dosage of these two antimalarial drugs. Meanwhile, better strategies should be developed to ensure the appropriate utilization of these drugs. Combined logical efforts by the government, as well as the general public, will help us steer through these difficult times.

Competing Interests

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