

# Chloroquine and Hydroxychloroquine for the Prevention and Treatment of COVID-19; a Fiction, Hope or Hype? An Updated Review

Sultan Saghir<sup>1</sup>, Naif AlGabri<sup>2</sup>, Mahmoud Alagawany<sup>2</sup>, Youssef Attia<sup>2</sup>, Salem Alailay<sup>2</sup>, Shaaban Elnesr<sup>2</sup>, Manal Shafi<sup>2</sup>, Omar Al-shargi<sup>2</sup>, Nader Al-balagi<sup>2</sup>, Abdullah Alwajeeh<sup>2</sup>, Omar Alsalahi<sup>2</sup>, Amlan Patra<sup>2</sup>, Asmaa Khafaga, <sup>2</sup>, Ahmed Negida <sup>2</sup>, Ahmed Noreldin<sup>2</sup>, Wesam Al-Amarat<sup>2</sup>, Amer Almainan<sup>2</sup>, Khaled El-Tarabily<sup>3</sup>, and Mohamed Abd El-Hack, <sup>2</sup>

<sup>1</sup>Al-Hussein Bin Talal University Princess Aisha Bint Al-Hussein Faculty of Nursing

<sup>2</sup>Affiliation not available

<sup>3</sup>United Arab Emirates University

November 27, 2020

## Abstract

In December 2019, the novel coronavirus disease pandemic (COVID-19) that began in China had infected more than 56 million individuals worldwide and accounted for more than 1.344.000 fatalities. With the dawn of this novel coronavirus (SARS-CoV-2), there was a requirement to select potential therapies that might effectively kill the virus, accelerate the recovery, or decrease the case fatality rate. Besides the currently available antiviral medications for HIV and HCV, the chloroquine/hydroxychloroquine (CQ/HCQ) regimen with or without azithromycin has been repurposed in China and was recommended by the National Health Commission, China in mid-February 2020. By this time, the selection of this regimen was based on its efficacy against the previous SARS-CoV-1 virus and its potential to inhibit viral replication of the SARS-CoV-2 in vitro. There was a shortage of robust clinical proof about the effectiveness of this regimen against the novel SARS-CoV-2. Therefore, extensive research effort has been made by several researchers worldwide to investigate whether this regimen is safe and effective for the management of COVID-19. This review article provides a comprehensive overview of the CQ/HCQ regimen. It summarizes the evaluating data from in vitro studies and clinical studies either for the protection or the treatment against SARS-CoV-2. There is a sharp difference of opinion about the role of CQ/HCQ regimen in treatment of COVID-19. The literature data are controversial and contradictory due to the diverse study design, population selection, dosage, regimen, and outcome measures. Current evidence from the two largest randomized-controlled trials (recovery and solidarity) suggests that the HCQ regimen does not decrease COVID-19 patients' mortality. However, conflicting data were published from observational studies showing that the drug might be sufficient. Therefore, more investigations are needed to emphasize these findings.

## Hosted file

Saghir et al. 2020.pdf available at <https://authorea.com/users/379271/articles/495522-chloroquine-and-hydroxychloroquine-for-the-prevention-and-treatment-of-covid-19-a-fiction-hope-or-hype-an-updated-review>