

COVID-19: HYDROXYCHLOROQUINE MAKES YOU BETTER OFF OR WORSE OFF

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ABSTRACT

As chloroquine and hydroxychloroquine are already in use and effective for certain diseases including malaria and auto-immune diseases. Therefore, the public has easy access to these medications, and importantly due to surge in prescriptions and self-medications based on speculations about these drugs for prevention and treatment of COVID-19, it has threatened the availability of chloroquine and hydroxychloroquine to patients for whom they are known to be effective. Several studies have shown that these drugs, with or without azithromycin, are significantly associated with greater hazard of in-hospital mortality, particularly in patients with cardiac conditions. Considering how effectively a physician must weigh pros and cons of it in each case and adjust its dose and use accordingly, self-medication becomes a big no. So people stocking up on hydroxychloroquine and using it without any guidance can be fatal and puts their life at risk. US president have argued about hydroxychloroquine that it is widely used and safe drug and could be “game changer” for COVID-19. This has reignited the controversy over the drug, and suggested individuals like businessmen for stockpiling and distribution of the drug to the public. Large randomized-controlled trails are required to evaluate their efficacy and safety so that patients could be protected by the undesirable and harmful effects associated with these drugs.

Keywords: COVID-19, Pandemic, Hydroxychloroquine, Azithromycin, Drug Safety

MANUSCRIPT:

Hydroxychloroquine, analogue of chloroquine and an anti-malarial drug, is an unproven agent that has been explored for prevention and treatment of corona virus disease 2019 (COVID-19). On March 28, 2020 US Food and Drug Administration (FDA) authorized temporary use of hydroxychloroquine and chloroquine for certain hospitalized patients diagnosed with coronavirus disease 2019 (COVID-19) during the pandemic, through an emergency use authorization (EUA) [1]. The COVID-19 pandemic has put immense pressure on medical professionals and drug authorities to tackle the disease and approve treatment for the patients as soon as possible. As of June 14, 2020 safety and efficacy of hydroxychloroquine and chloroquine,

based on well-controlled trials, have not been established.

A study of 90 hospitalized patients with confirmed COVID-19 found that patients who received hydroxychloroquine were at high risk of corrected QT interval (QTc) prolongation and treatment with both hydroxychloroquine and azithromycin was associated with greater changes in QTc. A patient also developed torsades de pointes who was treated with both hydroxychloroquine and azithromycin [2]. Therefore, we believe that clinicians should carefully weigh risks and benefits while considering hydroxychloroquine alone or both hydroxychloroquine and azithromycin, with close monitoring of ECG and electrolytes.

Interestingly even though hydroxychloroquine started as a lifesaving anti-malarial drug many years back, over time researchers discovered its various

immunomodulatory effects on the human immune system prompting its use in other auto-immune diseases. Despite the positives the drug did show a narrow safety margin and caution was recommended in patients with neuromuscular and psychotic disorders even when used as an anti-malarial [3].

An observational study from New York found that among hospitalized patients with COVID-19, treatment with hydroxychloroquine with or without azithromycin, compared with neither treatment, was not significantly associated with differences in in-hospital deaths [4].

National Institute of Health, Islamic Republic of Pakistan (NIH) has distinctly declared in its latest guidelines that there is no role of prophylactic chloroquine or hydroxychloroquine for COVID-19, and no specific treatment including chloroquine or hydroxychloroquine, is recommended for asymptomatic and mild cases. While for managing moderate cases, chloroquine or hydroxychloroquine can be started while monitoring QT-interval [5].

Recent studies have made this very clear that chloroquine or hydroxychloroquine (with or without azithromycin), are not beneficial for both prevention and treatment of COVID-19, and they can even cause harm to the patients, but these studies are observational and open-labeled randomized trials, not well controlled clinical trials.

As chloroquine and hydroxychloroquine are already in use and effective for certain diseases including malaria and auto-immune diseases. So public has easy access to these medications, and importantly due to surge in prescriptions and self-medications based on speculations about these drugs for prevention and treatment of COVID-19, it has threatened the availability of chloroquine and hydroxychloroquine to patients for whom they are known to be effective. Considering how effectively a physician must weigh pros and cons of it in each case and adjust its dose and use accordingly, self medication becomes a big no. So people stocking up on hydroxychloroquine and using it without any guidance can be fatal and puts their life at risk. Proponents like President Donald Trump have argued about hydroxychloroquine that it is widely used and safe drug and could be a “game-changer” for COVID-19 [6]. This has reignited the controversy over the drug, and suggested individuals like businessmen for stockpiling and distribution of the drug to the public.

For now, there is an urgent need of better, large, randomized controlled trials of hydroxychloroquine and chloroquine to evaluate safety and effectiveness in COVID-19 patients so that public could be timely protected from harmful effects of these drugs, and its

usage should be discouraged as severe side effects have been reported in several studies.

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AUTHOR CONTRIBUTIONS

MJT: Conceptualization, manuscript writing, review and editing

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