ASIA PACIFIC CENTER FOR EVIDENCE BASED HEALTHCARE

Should choloroquine or hydroxychloroquine be used in the prophylaxis of COVID-19?

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This rapid review summarizes the available evidence on the efficacy and safety of chloroquine or hydroxychloroquine in the prevention of COVID-19. This may change as new evidence emerges.

KEY FINDINGS

There is currently NO EVIDENCE to support chemoprophylaxis using chloroquine or hydroxychloroquine against COVID-19.

- In-vitro studies have shown that choroquine (CQ) and hydroxychloroquine (HCQ) are potent inhibitors of SARS-CoV2. HCQ has been used off-label as COVID-19 prophylaxis.
- At present, there are no studies to support the use of CQ or HCQ as chemoprophylaxis against COVID-19.
- There are currently 6 ongoing trials investigating CQ or HCQ as prophylaxis among healthcare workers or close contacts of COVID-19 patients.
- Serious adverse effects from CQ or HCQ use are uncommon, and include retinopathy, cardiomyopathy, prolongation of QT interval (which may lead to fatal arrhythmia), severe hypoglycemia, and bone marrow suppression. Risks are related to high doses or prolonged use.
- The Indian Medical Council of Medical Research recommends prophylaxis with HCQ for asymptomatic healthcare workers involved in the care of suspected or confirmed cases of COVID-19, and strongly warns against a false sense of security when on chemoprophylaxis.
- Other guidelines (WHO, CDC, Canadian, European, Australian, Chinese, Korean, Japanese) have no recommendations on chemoprophylaxis against COVID-19 because of the lack of data.
- The Philippine Society for Microbiology and Infectious Disease (PSMID) does not recommend HCQ or CQ as preventive therapy for COVID-19.

***DISCLAIMER**: The aim of this rapid review is to retrieve, appraise, summarize and update the available evidence on COVID-related health technology. This review has not been externally peer-reviewed; it should not replace individual clinical judgement and the sources cited should be checked. The views expressed represent the views of the authors and not necessarily those of their host institutions. The views are not a substitute for professional medical advice.*

Declaration of Conflict of Interest

LPV and IGC have no relevant conflicts of interest.

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Table 1. Characteristics of ongoing clinical trials

Study Trial/ Study Design	Setting/Population	Intervention	Outcomes	Status
HCQ Post Exposure Prophylaxis for Coronavirus Disease (COVID-19) NCT04318444 RCT, placebo-controlled	1600 adult household contacts of COVID-19 pxs NYC, USA	Post-exposure prophylaxis: 400 mg 2 tabs bid on D1, then 200 mg 1 tab bid D2 to D5	# of participants with symptomatic, lab-confirmed COVID-19 within 14 days of enrollment	Not yet recruiting
HCQ Chemoprophylaxis in Healthcare Personnel in Contact with COVID-19 Patients (PHYDRA) NCT04318015 3-blind RCT, placebo-controlled	400 healthcare personnel exposed to COVID-19 respiratory disesase (high risk and low risk) Mexico	HCQ 200 mg od x 60 d	1: symptomatic COVID-19 infection rate within 60 days after tx start 2: days of labor absenteeism; rate of absenteeism; rate of severe respiratory COVID-19 disease	Not yet recruiting
Post-exposure Prophylaxis/ Preemptive Therapy for SARS-Coronavirus-2 (COVID-19 PEP) NCT04308668 4-masked RCT, placebo-controlled	1500 adult healthcare workers or household contact Minnesota, USA	HCQ 200 mg 4 tabs once, then 3 tabs q 6-8h, then 3 tabs od x 4 consecutive days	1: Incidence of COVID19 disease at 14 days post enrollment; Self-reported COVID19 disease severity 2: Incidence of hospitalization; death; confirmed SARS-CoV detection; Sxs compatible with COVID19 (possible disease); All-cause study medicine discontinuation or withdrawal	Recruiting Estimated Start: March 17, 2020
Treatment of COVID-19 Cases and Chemoprophylaxis of Contacts as Prevention (HCQ4COV19) NCT 04304053 Open-label cluster randomized trial	3040 adult cases or contacts Barcelona, Spain	Cases: antiviral tx + HCQ prophylaxis: HCQ 200 mg 4 tabs on D1, 2 tabs on D2 to D4 Comparator: isolation and contact tracing	1: incidence of secondary COVID19 cases up to 14 days after tx start 2: virological clearance; mortality rate; drop outs; non-compliance	Recruiting Actual Start: March 18, 2020
Chloroquine/Hydroxychloroquine Prevention of Coronavirus Disease (COVID-19) in the Healthcare Setting (COPCOV) NCT04303507 2-blind RCT, placebo-controlled	10,000 ≥ 16 years, works in healthcare facility or other high-risk environment, OR inpatient or relative of a px in a participating hospital and likely exposted to COVID19 infection or another high-risk group Oxford, UK	CQ LD of 10mg base/kg followed by 155 mg od (250 mg chloroquine phosphate salt) OR HCQ sulphate 200 mg od x 3 months	Time Frame: 100 days 1: symptomatic COVID 19 infections 2: Symptoms severity of COVID-19; # of asymptomatic cases; # of symptomatic ARI; genetic loci and levels of biochemical components corrleated with freq of COVID 19 ARI and dse severity Others: drug exposure-protection relationship	Not yet recruiting
Effectiveness and safety of hydroxychloroquine sulfate in the preventive treatment of novel coronavirus pneumonia (COVID-19) ChiCTR2000031174 2-blind RCT, placebo-controlled	Healthy adults 18-17 y/o with negative COVID-19 nucleic acid test and antibody test Shanghai, China	HCQ sulfate	1: COVID-19 nucleic acid test	Not yet recruiting