Indian J Med Res 155, January 2022, pp 215-216
DOI: 10.4103/ijmr.ijmr_1303_21

Quick Response Code:

Correspondence

Chloroquine drops against SARS-CoV-2 infection

Sir,

We read with interest the article on efficacy and safety of chloroquine (CQN) nasal drops in asymptomatic and mild COVID-19 published recently[1]. The trial wasaimed to explore the potential therapeutic options for mild COVID-19 during the early pandemic and advocate further exploration of the intervention for prophylaxis against SARS-CoV-2 infection. However, whether the conclusions are meaningful as of today or warrant further large controlled trials remains debatable. We have a few concerns over the way conclusions are presented.

The conclusion about the potential role of topical nasal CQN as a prophylactic strategy based on the dip in Ct values in three of the four patients is intriguing as well as misleading. The primary outcome was to assess the drug tolerance, clinical and virological metrics. On careful examination, one can notice that one-third of patients had either adverse effects related to the drug and/or became non-compliant (probably due to adverse effects). As the authors mentioned that being a topical drug, it has predominant local site absorption; therefore, the serious adverse effects are unlikely[1]. It seems that the authors conveniently under-stressed the adverse effects of a topical agent. On the contrary, higher reverse transcription (RT-PCR) positivity rates (an important clinical outcome) on day 10 in the CQN group indicate that CQN drops may prolong the viral shedding. A recent systematic review has also shown prolonged viral shedding associated with the use of hydroxychloroquine (HCQ) in mild COVID-19 (relative risk - 1.21, 95% confidence interval: 1.11-1.31)[2]. This finding should have been highlighted as it can directly affect the time to hospital discharge (which is not mentioned) and has a potential impact over the infectivity period.

Furthermore, the authors may have over-represented the effect of CQN drops on Ct values in non-infected individuals. This observation includes only nine participants and is unlikely to pass the conventional threshold of statistical significance. A recent systematic review (3 studies, 2429 patients) showed that prophylactic HCQ (pre- or post-exposure) did not reduce the risk of getting SARS-CoV-2 infection or need for hospitalization, rather it increased the risk for adverse events (as seen in this study)[2]. The same systematic review (12 studies, 9917 participants) has also shown that therapeutic use of HCQ for COVID-19 is associated with increased mortality and should not be used as a prophylactic or therapeutic agent[2].

Though clinically asymptomatic or mildly symptomatic individuals are not admitted to the hospital now, if this intervention has been found efficacious and safe, it can be used in home-based care. Unfortunately, a meta analysis of radomized trial has reinforced that HCQ or its derivative in any form may be harmful and better be avoided in the management of COVID-19[3].

***Financial support & sponsorship*:** None.

***Conflicts of Interest*:** None.

Jogender Kumar* & Jitendra Meena
Department of Pediatrics, Postgraduate Institute of Medical Education & Research, Chandigarh 160 012, India
**For correspondence*: jogendrayadv@gmail.com

Received May 4, 2021

References

1. Thakar A, Panda S, Sakthivel P, Brijwal M, Dhakad S, Choudekar A, *et al.* Chloroquine nasal drops in asymptomatic and mild COVID-19: An exploratory randomized clinical trial. *Indian J Med Res* 2021; *153* : 151-8.
2. Kumar J, Jain S, Meena J, Yadav A. Efficacy and safety of

© 2022 Indian Journal of Medical Research, published by Wolters Kluwer - Medknow for Director-General, Indian Council of Medical Research

hydroxychloroquine/chloroquine against SARS-CoV-2 infection: A systematic review and meta-analysis. *J Infect Chemother* 2021; *27* : 882-9.

3. Lewis K, Chaudhuri D, Alshamsi F, Carayannopoulos L, Dearness K, Chagla Z, *et al*. The efficacy and safety of hydroxychloroquine for COVID-19 prophylaxis: A systematic review and meta-analysis of randomized trials. *PLoS One* 2021; *16* : e0244778.