

# Letter to the Editor

## Letter to editor on the paper entitled “Efficacy of chloroquine and hydroxychloroquine in the treatment of COVID-19”

Dear Editor,

We highly appreciated a comprehensive review of chloroquine and hydroxychloroquine in the treatment of COVID-19 by Meo et al<sup>1</sup>. The authors deeply reviewed both *in vitro* and clinical studies related to the effectiveness of chloroquine and hydroxychloroquine against COVID-19. Several countries, including Indonesia, used these drugs for COVID-19 a few months during the pandemic, but now, they have been retracted due to safety concerns.

In our country, Indonesia, both drugs have been withdrawn from the emergency authorization use (EUA) to treat COVID-19 by the National Agency of Drugs and Food Control of Indonesia by the end of November 2020<sup>2</sup>. These drugs have demonstrated a fatal cardiotoxicity effect, namely QT prolongation. In Indonesia, a case report<sup>3</sup> reported two COVID-19 patients increased QT on days 3-4 after administering 500 mg of chloroquine phosphate twice daily. Soon after, the medicine was stopped<sup>3</sup>. As we know, the comorbidities contributed to the severe outcomes of COVID-19 patients.

The most common comorbidities among COVID-19 patients in Indonesia were cardiovascular disease and metabolic syndrome<sup>4</sup>. Patients with a history of heart disease and concomitant use of azithromycin precipitated the QT prolongation. A study<sup>2</sup> in several hospitals in Indonesia reported 213 cases of COVID-19 patients receiving CQ and HCQ; the QT prolongation event was 28.2%. Hydroxychloroquine was still used to manage autoimmune disease. Meanwhile, chloroquine was withdrawn due to no longer use for any indications. Oseltamivir, favipiravir, and remdesivir are preferred as antiviral to treat COVID-19 in Indonesia<sup>5</sup>. Vaccination program has been held since January 2021 until now to limit new cases of COVID-19. Surprisingly, Meo et al<sup>1</sup> also reported lower malaria cases in Southeast Asia due to the widespread use of chloroquine. However, chloroquine has not been used to treat malaria in our country and replaced with artemisin-based combination therapy and doxycycline as chemoprophylaxis<sup>6</sup>.

### Conflict of Interest

The Authors declare that they have no conflict of interests.

### References

- 1) Meo SA, Klonoff DC, Akram J. Efficacy of chloroquine and hydroxychloroquine in the treatment of COVID-19. *Eur Rev Med Pharmacol Sci* 2020; 24: 4539-4547.
- 2) National Agency of Drug and Food Control of Indonesia. Accessed from <https://www.pom.go.id/new/view/more/klarifikasi/121/PENJELASAN-BADAN-POM-RI.-TENTANG-Pencabutan-Emergency-Use-Authorization-Hidroksiklorokuin- dan-Klorokuin-untuk-Pengobatan-COVID-19.html>. Cited date May 14, 2021.
- 3) Widyaningsih PD, Putra PGP, Asmara DGW, Bagiari E, Santosa A, Harapan H, Masyeni S. Chloroquine-induced prolonged QT interval in COVID-19 patients in Indonesia: case series. *Biomed & Pharmacol J* 2021; 14: 1-5.

- 4) Karyono DR, Wicaksana AL. Current prevalence, characteristics, and comorbidities of patients with COVID-19 in Indonesia. *J Community Empowerment Health* 2020; 3: 77-84.
- 5) Ministry of Health of Indonesia Republic. Protocol for the COVID-19 management: a pocket book 2<sup>nd</sup> ed. 2021.
- 6) Ministry of Health of Indonesia Republic. Pocket book for the management of malaria case, 2017.

*O. Nugraha Putra*

Department of Clinical Pharmacy, Hang Tuah University, Surabaya, Indonesia