



Letter to the Editor

Comment to Sands et al. – No clinical benefit in mortality associated with hydroxychloroquine treatment in patients with COVID-19


Dear Editor,

I read with interest the retrospective analysis of Sands et al. (2020) on the effects of hydroxychloroquine (HCQ) treatment in 1669 COVID-19 patients. The principal outcome was the association between this treatment and in-hospital deaths. The authors concluded that a significant increase in mortality was associated with the treatment. However, this study contains many biases and limitations which must be reviewed before drawing this conclusion.

Data were collected at 21 health centers, so the dosage and duration of HCQ use can vary. However, the authors have not mentioned this issue. Figure 1 (Sands et al., 2020) showed that many patients started treatment at >3 days after admission to the hospital. In addition, the duration of treatment is very short (median = 5 days, range = 1–12 days). A total of 130/973 (13.4%) patients received HCQ at an advanced stage of disease (i.e. requiring intensive care and/or ventilator support), and 40/101 (39.6%) patients who died received the initial treatment at this stage; this suggests that anti-SARS-CoV-2 treatment must be introduced early.

Their results showed a significant difference in mortality between 3 groups of patients: 7.2% of patients who received the first dose while at mild severity, and 21.6% and 50.0% at moderate and severe severity, respectively, P -value < 0.0000 (Chi2 test using OpenEpi [http://www.openepi.com/Menu/OE_Menu.htm]). Gautret et al. (Gautret et al., 2020; Lagier et al., 2020) showed that patients were not considered to be under treatment if they received HCQ for <3 days.

Several biomarkers which may be potential risk factors for predicting severe and fatal COVID-19 were not evaluated, such as white blood cell, lymphocyte and platelet count, D-dimer >1 µg/mL, and high lactate dehydrogenase level and serum ferritin (Henry et al., 2020; Li et al., 2020).

In their data, one BMI measurement was recorded as 2046.3 kg/m². This patient should be excluded from the study because of the unrealistic nature of this value. The authors declared that they had imputed the BMI at 29.55 kg/m² (as the median); however, in their analysis, the BMI ranged from 13.8 to 2050 (Tables 1 and 3) (Sands et al., 2020). In multivariable logistic regression analysis, the BMI was introduced, and the odds ratio in

both models was 1.00, 95% CI = [1.00–1.00], suggesting that their final results were not reliable.

In conclusion, the quality of their work was insufficient to conclude the effect of HCQ on mortality in COVID-19 patients.

Conflict of interest

None.

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Ethical approval

Not applicable.

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