Chloroquine treatment and COVID-19

In 2005, after the 2002-3 SARS epidemic researchers demonstrated the in-vivo anti-viral effect of chloroquine in primate cell lines infected with SARS-CoV (Vincent et al., 2005). These results were further confirmed by Gao et al., Wang et al., and Liu et al., who also showed inhibitory effects of chloroquine on SARS-CoV-2, the etiological agent of COVID-19. Chloroquine is well known for its anti-malarial properties as well as side-effects, but when used to treat malaria the benefit out-weigh the risks. Hydroxychloroquine a less toxic alternative form of chloroquine, is also used to treat autoimmune diseases such as Lupus and Rheumatoid arthritis, in addition to malaria (McChesney 1983; Touret & de Lamballerie, 2020). As a result, chloroquine has been suggested as a potential COVID-19 treatment and is currently being tested in many trials including the trans-national WHO: SOLIDARITY TRIAL.

Initial clinical studies on small cohorts suggested that chloroquine treatment was associated with improved prognosis (Gauret et al., 2020). However, recently published articles by Molina et al., and Borba et al., (Pre-Print), suggest no beneficial effect of the treatment. Additionally, preliminary results from a randomised clinical trial of chloroquine treatment for COVID-19 by Borba et al., (Pre-Print) further caution against high dose chloroquine treatment for COVID-19, as it leads to cardiovascular adverse effects.

We therefore, eagerly await more reports from clinical trials on the utility of chloroquine as COVID-19 treatment.

References:

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