Hydroxychloroquine prophylaxis for high-risk COVID-19 contacts in India: a prudent approach

We read with interest the Correspondence from Sahaj Rathi and colleagues[1] on hydroxychloroquine prophylaxis for COVID-19 contacts in India. The authors see the decision by the Indian Council of Medical Research, under the Ministry of Health and Family Welfare, to recommend chemoprophylaxis with hydroxychloroquine in select groups of contacts at high risk as an abandonment of scientific reasoning in desperate times. We present our counterview on this issue.

The safety concerns raised by Rathi and colleagues include haemolysis in individuals with glucose-6-phosphate dehydrogenase deficiency and QTc prolongation. The prevalence of glucose-6-phosphate dehydrogenase deficiency in India ranges from 0% to 10%, with heterogenous distribution and incomplete penetrance.[2] Haemolysis is not clinically significant when hydroxychloroquine is administered in usual therapeutic doses to individuals with WHO class II and III glucose-6-phosphate dehydrogenase deficiency, and the safety of hydroxychloroquine is well established with prolonged use. Furthermore, a routine electrocardiogram for QTc interval is not essential before hydroxychloroquine initiation in clinical practice and is not recommended in any guidelines. Decades of experience with this drug in autoimmune disorders is enough to allay these fears.

Concerns have been raised regarding lack of data on efficacy of hydroxychloroquine against severe acute respiratory syndrome coronavirus 2. A paucity of data is expected in the first wave of a pandemic caused by a novel virus. Hydroxychloroquine has been shown to have in-vitro activity against the virus. Recently published human trials,[4] along with other unpublished data,[5] suggest that it could decrease the duration of viral shedding and symptoms if given early. A study from South Korea shows the efficacy of hydroxychloroquine for post-exposure prophylaxis.[6] Historically, many drugs used in the treatment of an infectious disease have also been used for prophylaxis. The pharmacokinetics of hydroxychloroquine, such as its long half-life and high lung concentration (500-times the blood concentration), are ideally suited for use as an agent for prophylaxis.[7]

The criticisms made by Rathi and colleagues overlook the fact that prophylactic hydroxychloroquine would be targeted to individuals at high risk rather than the general population. Projection of adverse events to the population level causes unjustified alarm. The advisory from the Indian Council of Medical Research includes a section of key considerations that address all such concerns, which have been ignored by Rathi and colleagues. In addition, the argument that there will be a shortage of the drug is not tenable. Production has been ramped up and the Government of India is supplying hydroxychloroquine to more than 50 countries, which has received widespread appreciation.

We are in the midst of a once-in-a-generation pandemic, given the scale of morbidity and mortality. The frontline health-care workers are at great risk of infection; in Italy, 20% of the responding health-care workers have been infected.[8] A wide variety of therapeutic interventions are being tried in COVID-19 patients, without any evidence but following a prudent approach. We believe that the hydroxychloroquine prophylaxis in selected groups of high-risk contacts is a prudent approach considering the risk–benefit analysis. Implemented as envisaged in the recommendation document from the Indian Council of Medical Research, evidence will be generated for future recommendations.

We declare no competing interests.

*Praveen Tilangi, Devashish Desai, Adil Khan, *Manish Soneja*
manishsoneja@gmail.com

Department of Medicine, All India Institute of Medical Sciences, New Delhi 110029, India

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