Correspondence

To the Editors

Mass praziquantel for prevention against liver fluke infestation and incidence of COVID-19: a report from endemic area

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Dear Editors,
COVID-19 causes more than 20 million infected persons worldwide. The repositioning of the classic drug for management of COVID-19 is interesting. Several drugs are studied for usefulness for prevention and treatment of COVID-19 of which praziquantel is a drug proposed for its effective pharmacological binding to pathogen[1,2]. Effect of praziquantel on COVID-19 is interesting. In a recent report from Africa, mass administration of praziquantel for prevention of schistosomiasis among school-aged children was related to reduction of COVID-19 active cases[3].

Here, the authors would like to share data from another area that mass praziquantel is also used for viz. control of liver fluke. The setting is Thailand, a tropical country in Indochina which has the world highest incidence of liver fluke infection and liver fluke related biliary cancer[4]. Similar to the public health policies for controlling of schistosomiasis in Africa, the mass antiparasitic drug is given to the local paediatric population aiming at control of liver fluke infection. The local data showed that there is a significantly lower incidence of COVID-19 in the area that liver fluke is endemic and mass praziquantel administration is used (Table 1).

Table 1: ***Incidence of COVID-19 in different regions (data on December 2020)***

Region	Liver fluke endemic area with mass praziquantel administration	COVID-19 incidence
Northern	Yes	201
Northeastern	Yes	124
Southern	No	758
Central	No	2449

The observation showed a trend of higher COVID-19 incidence in the area without mass praziquantel distribution policies. This data is concordant with the previous report from Africa on effect of praziquantel use on incidence of COVID-19[3].

However, this is only a preliminary report of a possible effect. It needs to be confirmed with a randomised double-blind, placebo-controlled clinical trial. There is no scientific basis for the use of this drug as a therapeutic measure at the present time.

References

1. Lima WG, Brito JCM, *et al.* The potential of drug repositioning as a short-term strategy for the control and treatment of COVID-19: a systematic review. *Archives of Virology* 2020 Jun 8: 1–9. https://doi.org/10.1007/s00705-020-04693-5 PMid: 32514689 PMCid: PMC7276657

2. de Almeida SMV, Soares JCS, *et al.* COVID-19 therapy: What weapons do we bring into battle? *Bioorganic and Medicinal Chemistry* 2020; **28**(23): 115757. https://doi.org/10.1016/j.bmc.2020.115757 PMid: 32992245 PMCid: PMC7481143

3. Oyeyemi OT, Okunlola OA, Adebayo AD. Assessment of schistosomiasis endemicity and preventive treatment on coronavirus disease 2019 outcomes in Africa. *New Microbes and New Infections* 2020; **38**: 100821. https://doi.org/10.1016/j.nmni.2020.100821 PMid: 33251016 PMCid: PMC7679227

4. Zheng S, Zhu Y, et al. Liver fluke infection and cholangiocarcinoma: a review. *Parasitology Research* 2017; **116**(1): 11-9. https://doi.org/10.1007/s00436-016-5276-y PMid: 27718017

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