

Relationship Between Prevalence of Opisthorchiasis and Incidence of COVID-19: An Observation

Opisthorchiasis Prevalansı ile COVID-19 İnsidansı Arasındaki İlişki: Bir Gözlem

✉ Rujittika Mungmunpantipantip¹, ✉ Viroj Wiwanitkit²

¹Private Academic Consultant, Bangkok Thailand

²Dr DY Patil University, Pune, India

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Dear Editor,

Parasitic infestation is a common public health in developing country. In tropical country, there is a high incidence of intestinal parasitic disease. In Indochina, the highest incidence of opisthorchiasis is reported (1). This infection is associated with cholangiocarcinogenesis and becomes important local problem. The interrelationship between opisthorchiasis and other infection is an interesting issue. Here, the authors would like to share preliminary data from the area with extremely high incidence of opisthorchiasis, Thailand. The local data showed that there is a lower incidence of Coronavirus disease-2019 (COVID-19) in the area with higher prevalence of opisthorchiasis (Table 1). The clinical relationship between parasitic disease and COVID-19 is little mentioned. In this report, the observation trend is interesting. An underlying pathophysiological process that might cause protective effect against active severe COVID-19 in opisthorchiasis is thioredoxin reductase-1 generating from parasite (2). This bioselenoprotein has

an anti-inflammatory effect and is useful for survival of virus in biliary tract (2) and the anti-inflammatory property might be protective against pathological inflammation process in COVID-19.

Keywords: Opisthorchiasis, COVID-19, incidence

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Table 1. Incidence of COVID-19 and prevalence of opisthorchiasis in different regions (data on December 2020)

Region	COVID-19 incidence	Prevalence of opisthorchiasis (%)
Northeastern	124	18.6%
Northern	201	10%
Southern	758	5%
Central	2,449	2%

COVID-19: Coronavirus disease-2019

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Address for Correspondence/Yazar Adresi: Rujittika Mungmunpantipantip, Private Academic Consultant, Bangkok Thailand
Phone/Tel: +68328328822 E-mail/E-Posta: rujittika@gmail.com ORCID ID: orcid.org/0000-0003-0078-7897