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LETTER TO THE EDITOR

Response to “Novel Middle East respiratory syndrome coronavirus”

Dear Editor,

We thank Dr Wiwanitkit for his interest in our recent article in which we discussed the important findings and unanswered questions on the evolving epidemic caused by the Middle East respiratory syndrome coronavirus (MERS-CoV).¹ Until now, the epidemic has not been completely controlled despite international collaborations, and fears of a severe acute respiratory syndrome (SARS)-like large-scale epidemic continue to mount.² The total number of laboratory-confirmed and fatal cases keeps on increasing, and person-to-person transmission is evident in several recent outbreaks.¹ Furthermore, the definitive natural reservoirs and possible intermediate animal hosts have not yet been successfully identified. As pointed out by Dr Wiwanitkit, an increasing number of novel emerging viruses have likely originated from animals, especially bats and birds.³ Asymptomatic shedding, dissemination, and mixing of different viruses are facilitated by the high species biodiversity, roosting and migratory behaviors, and unique adaptive immune system of bats and birds.³ The identification and segregation of the definitive natural reservoirs and intermediate animal species from humans would be important measures to prevent further inter-species transmission of MERS-CoV from animals to humans.

In addition to establishing the mechanism of transmission of MERS-CoV from animal sources to humans, Dr Wiwanitkit has proposed a number of important public health measures against the MERS epidemic. One of the key strategies is the development of accurate diagnostic tests for both the acute and convalescent phases of the infection. Although real-time polymerase chain reaction might be used in the acute phase of the infection, retrospective diagnosis and large-scale serological studies mainly rely on serological tests. This is especially important as mild cases of MERS have been increasingly

reported.¹ Notably, we found that cross-reactive antibodies against MERS-CoV might be found in convalescent SARS patients' sera by both immunofluorescent and neutralizing antibody tests, possibly related to a significant B-cell epitope overlapping the heptad repeat 2 region of the spike protein.⁴ Therefore, in Southeast Asia, where the proportion of the general population with previous SARS infection might be higher than that in the Middle East and Europe, this potential diagnostic fallacy should be considered. Further refinement of serological tests and other diagnostic tools, and continuous preparedness against MERS would be important to prevent a SARS-like epidemic in our region.

Conflicts of interest

The authors have no conflicts of interest relevant to this article.

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