

Exposure history and molecular epidemiology of SARS-CoV-2: A reappraisal

Dear Editor,

Coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the present global public health problem. The disease is already a pandemic affecting more than 34 million people around the world. The main transmission of this disease is by respiratory contact and there are also other possible atypical modes of transmission.^[1] Understanding the risk of transmission due to different activities with interrelationships to epidemiology is an important issue in disease prevention. In a recent report from Thailand, the in-depth molecular typing analysis on the epidemiology of SARS-CoV-2 is done and the results showed that there are many risk exposure histories and also many types of virus. Puenpa *et al.*^[2] proposed a different genotype pattern of SARS-CoV-2 among samples from patients with local transmission and imported disease. Puenpa *et al.* noted the possible usefulness in molecular epidemiology monitoring of the genotype of SARS-CoV-2 for indicating the risk group to be focused on for COVID-19 outbreak containment.

Here, the authors reappraised the available previous data on the molecular epidemiology of SARS-CoV-2 with a special focus to access the association between exposure history and molecular epidemiology of SARS-CoV-2. Based on available data on 36 cases with known exposure history,^[2] the details of types of SARS-CoV-2 are presented in Table 1. According to the analysis, there is no association between exposure history and type of SARS-CoV-2 (Chi-square test, $P > 0.05$). Therefore,

Table 1: Exposure history and type of SARS-CoV-2

Molecular type of SARS-CoV-2	Exposure history		
	Contact at nightclub or restaurant	Importation according to immigration history	Contact at sport stadium
GR	1	0	2
GH	4	2	1
T	10	14	3
L	0	0	0
V	0	1	0

it can imply that molecular epidemiology monitoring of the genotype of SARS-CoV-2 might not be useful for specifying any specific risk group during the COVID-19 outbreak. Nevertheless, molecular epidemiology surveillance is still helpful for monitoring possible sense mutations that might cause a significant change in disease presentation.

In addition, it is usually difficult to correctly trace the contact exposure history of a COVID-19 patient. A patient might get the disease from occupational work or other environmental exposure.^[3]

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Conflicts of interest

There are no conflicts of interest.

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