EDITORIAL

The challenges of Covid-19 testing: Time for Pathologists to rise to the occasion

Geok Chin TAN1, Soon Keng CHEONG2,3

¹Department of Pathology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia, ²National Cancer Council (MAKNA), Kuala Lumpur, and ³Faculty of Medicine and Health Sciences, Universiti Tunku Abdul Rahman (UTAR), Kajang, Malaysia.

An outbreak of novel coronavirus (Covid-19) was first reported in Wuhan, China in the late December. Since then, the positive cases have increased exponentially to 1.4 million (as of 8 April 2020). The ability of a country to cope with increasing number of Covid-19 testing is the ultimate test. Teaching/university hospitals should pull their resources and man-power to provide the muchneeded assistance to the demand of Covid-19 testing. Inadequate testing could result in unrecognised Covid-19 infected individuals, roaming freely in the population. The other issue is the sensitivity of test if samples were obtained from different sites. Classically, the confirmation of diagnosis of Covid-19 depends on real time polymerase chain reaction (RT-PCR) analysis to detect viral genetic material in either a nasal swab or bronchioalveolar lavage sample. Wang et al. (2020) reported that bronchioalveolar lavage sample has the highest sensitivity in identifying Covid-19, followed by sputum and nasal swab with positive rates of 93%, 72% and 63%, respectively.3 Furthermore, they found that nasal swab contained the highest concentration of viral load as it required less number of cycles to achieve higher copy numbers. In some patients, viral genetic material was also identified in faeces and blood.3 While the reliability of testing is a concern, the safety of the laboratory staff also has to be kept in mind. In this issue, there are three review articles on Covid-19, first article described the general properties of coronavirus, second article described the diagnostic performance of Covid-19 serology assay and third article described the importance of the site of sampling for Covid-19.4-6

Keywords: coronavirus, Covid-19, diagnostic testing, pathology

REFERENCES

- Huang C, Wang Y, Li X et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet. 2020; 395: 497-506.
- 2. Johns Hopkins Coronavirus Resource Center, https://coronavirus.jhu.edu/map.html (8 April 2020)
- 3. Wang W, Xu Y, Gao R, *et al.* Detection of SARS-CoV-2 in different types of clinical specimens. *JAMA*. Published online March 11, 2020. doi:10.1001/jama.2020.3786.
- 4. Malik YA. Properties of Coronavirus and SARS-CoV-2. Malays J Pathol. 2020; 42: 3-11.
- 5. Zainol Rashid Z, Othman SN, Abdul Samat MN, Ali UK, Wong KK. Diagnostic performance of COVID-19 serology assays. Malays J Pathol. 2020; 42: 13-21.
- Mawaddah A, Gendeh HS, Lum SG, Marina MB. Upper respiratory tract sampling in COVID-19. Malays J Pathol. 2020; 42: 23-35.