



A Close Encounter with COVID-19

Text and photos by Dr Lam Mun San

COVID-19 has turned the lives of Singaporeans upside down since the first case was reported on 23 January 2020 (an imported case of a Wuhan tourist). As of 15 April 2020, Singapore has reported a total of 3,252 cases, making us the third highest number of cases in Southeast Asia, after the Philippines and Malaysia.¹ It has also penetrated many aspects of our lives, affecting people in various industries and organisations – healthcare, tourism, hospitality, finance, education, religious organisations, retail, foreign workers and most recently, a Singapore Armed Forces regular.

As an infectious disease (ID) specialist who entered private practice in the year 2000, I had completely escaped the onslaught of SARS. I watched from the sidelines as my colleagues in public institutions battled the scourge of the frightening infection in 2003. It would be correct to say that most doctors in private practice had no first-hand experience with SARS. We were protected by our colleagues in the restructured hospitals, especially Tan Tock Seng Hospital which was designated “SARS central”.

The opening of the National Centre for Infectious Diseases (NCID) was indeed timely and welcoming, even though we worried that it would become a white elephant. Our one and only patient, a 38-year-old Nigerian man with monkeypox,² did the opening honours in May 2019. Many had forgotten about SARS 17 years ago and had ignored the emergence of a new infection.

My encounter with COVID-19

On 3 February 2020, I cared for a patient at Mount Elizabeth Novena Hospital who was admitted as a fever of unknown origin.

Clinical Aspects of Case 29: Mr A / Male / 41 years old / Married / IT executive

The patient was admitted from the hospital's emergency department on 3 February 2020 for a fever of seven days with mild respiratory and

gastrointestinal symptoms. He had consulted GPs on two occasions and was given symptomatic treatment prior to admission. He had no risk factors – no recent travel to China and no contact with high risk individuals. His family members were also well. As such, he did not fit the case definition then.³ In other words, he was deemed a “safe” case or a low risk patient. Hence, he was able to slip through the first gantry (the emergency department) and was admitted to the general ward.

Clinical examination showed a febrile and slightly dehydrated but otherwise healthy patient. Vital signs were normal, he was not in distress and oxygen saturation on room air was normal. His oropharynx was mildly injected and lung auscultation was clear. Abdominal examination was unremarkable. There were no rashes or cervical lymph nodes detected.

The admitting blood tests, including a negative rapid flu-swab test, were unremarkable except for a dengue IgM positive. A chest x-ray (CXR) done on admission was normal (Figure 1). A full blood count (FBC) showed a normal FBC with a very slight neutrophilia 81.3%, normal platelets of 214k, normal white cell count, and normal renal and hepatic panels. C-Reactive protein was elevated at 37.70 mg/L, dengue NS1 Ag was negative, dengue IgM positive, dengue IgG negative, mononucleosis spot test negative, and mycoplasma serology (IgM, Ab) was negative. He was managed symptomatically with intravenous hydration, antipyretics, cough syrup and Difflam throat sprays. He remained febrile over the next two days at day 9 of putative dengue diagnosis. Chest auscultation on the morning of day 3 hospitalisation revealed new onset lung crepitations which were not heard in the first two days. A repeat CXR was ordered on 5 February. The CXR done 48 hours after the first revealed scattered peripheral patchy alveolar infiltrates in both lungs (Figure 2). It was alarming enough for the radiologist to call me about his travel history. Further detailed testing for respiratory panel (Respiratory



Figure 1



Figure 2

Panel Multiplex) including COVID-19 was sent. Respiratory Panel Multiplex returned negative. The COVID-19 test result was confirmed the same evening. I received a call from the Ministry of Health (MOH) at 10 pm that night.

My contact with him was brief and I had worn a surgical mask which I wore routinely for patients with respiratory symptoms. From an infection control point of view, a surgical mask was adequate for droplet infection. At the time of writing, it is believed that COVID-19 is transmitted via droplet infection and close contact. Also, I would like to highlight that my experience with sending a swab for COVID-19 in a low risk individual was daunting, to say the least. This was before the MOH instituted COVID-19

testing for all pneumonia cases in restructured hospitals on 4 February 2020.⁴ I had to “get permission” from a public health officer managing the MOH hotline when testing policies were more restrictive. The patient was transferred to NCID the next day on 6 February 2020. I understand that he did well and was discharged about one week later.

An interesting aspect of this case was the positive dengue serology (dengue IgM +). A case of coinfection with both dengue and COVID-19 was reported in the *Straits Times* on 20 February 2020 at Ng Teng Fong General Hospital.⁵ The patient (case #82) was admitted with classical dengue signs and symptoms and treated as such in the general ward until COVID-19 testing was ordered for persistent fever and respiratory symptoms. This returned positive and she was transferred to an isolation ward. My patient did not have any rash or thrombocytopenia, and dengue Ag and dengue IgG were negative; although he had an isolated dengue IgM positive, which I believe in retrospect could represent cross-reactivity from another viral infection (COVID-19). This would complicate matters as Singapore is also experiencing an ongoing dengue epidemic.

Aside from this, I would have to say that the MOH did a good job of updating the public on this outbreak, with its frequent press briefings, and the transparent reporting of cases and containment measures. The only hiccup was when they upgraded the Disease Outbreak Response System Condition from yellow to orange, causing panic among the public resulting in frantic stockpiling and a shortage of masks, hand sanitisers and even toilet paper!

My voluntary LOA

Although it was deemed a low risk exposure, I was advised by MOH and Mount Elizabeth Novena Hospital to take a 14-day voluntary leave of absence (LOA), so as to allay fears from colleagues and patients, in case I was incubating the disease and would inadvertently pass it on to them.

I had not taken a day of medical leave for as long as I can remember, so spending 14 days at home doing “nothing” was a new chapter for me. Thanks to Netflix, Marie Kondo and social media, I was able to occupy myself with tasks I would not ordinarily have the luxury of time to do. The clinic was busy for the first few days as my staff had to deal with a barrage of phone calls and emails from concerned patients. I had no idea how fast news could travel. The clinic even received a call from a *New Straits Times* reporter (all the way from Malaysia) asking sensitive questions about my status, all of which were skilfully handled by my clinic staff (kudos to ShinYi). This was a real test of a “public relations exercise”, particularly important in private practice. I also received many messages from colleagues and well-wishers, as well as “get well soon” messages. Although I was as well as I could be, I appreciated them very much. I also received some congratulatory messages for owning the dubious honour of diagnosing the first case with no risk factors and no links to clusters. (*Thank you very much!*)

Lessons from this episode

1. Case definitions are helpful but there will always be the first case that falls outside the net.
2. Unknown fevers should be respected and treated with care especially during this time.
3. Striking the right balance between paranoia and complacency is difficult, but we should err on the side of safety. We see thousands of patients with fever and respiratory symptoms daily in Singapore – you can imagine the amount of background noise here.
4. Complacency is dangerous. I hope we will not forget this episode when it blows over.
5. Caution is needed with dengue serology cross-reaction, especially when there are predominant respiratory symptoms and absence of classic dengue symptoms/signs like rash and thrombocytopenia. A positive dengue antigen test offers some reassurance.

Acknowledgements

I would like to thank all the frontline healthcare workers in our restructured hospitals and NCID for courageously handling the situation and protecting the rest of the public from this infection. Last but not least, I would like to thank my family (including my domestic helpers) for putting up with me during the two weeks of my confinement at home. And my patient husband who had been bearing the brunt of being asked repeatedly why he was not on quarantine (for being the contact of a contact). ♦

Information is accurate as at time of print.



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