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SARS: Scourge of Western Pacific countries?

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Introduction

SARS was the first pandemic of the 21st century. It was postulated that contact with wild animals sold for human consumption at live markets in southern China might be responsible for the emergence of this new infectious disease in Guangdong in mid-November 2002 [1]. SARS-like virus has been detected in some animal species, including the masked palm civet cats. However, there is no conclusive evidence that civets transmit SARS-coronavirus to humans and no animal reservoir of this virus has been definitely identified [1,2].

The World Health Organisation (WHO) s data as of 31 December 2003 reported a total of 8090 probable SARS cases during the last crisis, with 96% of the patients from the countries in the Western Pacific Region [3].

Resurgence of SARS

After the SARS outbreak was declared contained on 5 July 2003, the world witnessed the first laboratory-acquired SARS in Singapore in September 2003 [4], followed by Taiwan in December 2003 [5]. Both these patients did not result in secondary infection.

In December 2003, China reported the first confirmed case of SARS not linked to a laboratory accident [6]. By 31 January 2004, a total of 4 laboratory confirmed cases of SARS since 16 December 2003 were reported in China [7]. These 4 cases were associated with mild illness and did not transmit the infection to others. The source of infection in these 4 cases was uncertain.

In April 2004, China reported 2 cases of laboratory-acquired SARS in 2 researchers working at the national Institute of Virology in Beijing [8]. The Institute was closed on 23 April [9]. At the time of writing, these 2 patients infected 9 cases, 1 of whom died on 19 April 2004. Close to 1000 contacts were under medical observation [8].

What lessons have we learnt?

It appears that the spectre of SARS is here to stay, with its episodic recurrence, either from environmental source or laboratories dealing with SARS virus research.

Each laboratory-acquired SARS infection is an unfortunate accident. It highlighted the need for continued surveillance and strict compliance with guidelines for infection control in SARS laboratories [10]. Laboratory-acquired SARS may result in different patterns of illness and transmission [11].

Several other respiratory diseases have symptoms similar to SARS, and some may also cause atypical pneumonia. During inter-epidemic period, diagnosis of a case of confirmed SARS requires independent verification of results by an external international reference laboratory because of international public health implications [8].

Early, prompt and transparent reporting of SARS-like illness via internet is an effective means of alerting the world so that immediate appropriate public health actions can be taken. Every country has an important role to play to keep our world free from SARS. Modern air travel has rendered the world a truly global village, making easy access across the political boundary between countries rapid. Measures such as border screening at immigration points and heightened vigilance in the healthcare settings are important strategies to avert big outbreaks with severe consequences.

SARS was predominantly a nosocomial infection [12]. This was because during the early part of the outbreak before this syndrome was recognised, undiagnosed SARS patients had the potential to infect many others before protective measures were instituted. Singapore was the fifth country to be affected by SARS (onset of symptoms of first probable SARS case on 25 February 2003) after China (16 November 2002), Hong Kong (15 Febru-

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ary 2003), Vietnam and Canada (both on 23 February 2003) [3]. In Singapore, three-quarters of infection occurred in hospitals or nursing homes where healthcare workers (HCWs), non-SARS patients and visitors were infected. Worldwide, about 21% of patients were HCWs. In Toronto and Singapore, HCWs comprised more than 40% of the patients [3].

Dr Carlo Urbani, aged 46, was a fallen SARS warrior who first alerted the medical community about this new infectious disease [13]. People adore heroes. But their loved ones would rather grow old with an ordinary person than live with the memory of a dead hero. Honestly, who is not afraid to die? But the sad fact was that we had to be prepared to die in the course of our professional duties. We cannot run away from these hard facts˘about 1 out of 5 SARS patients required ICU care and in-ICU mortality was about half [14-19].

Everyday, when HCWs arrived in hospital for work, they had to gear up, physically, psychologically and emotionally for another day of battle. Even within the hospital setting, it was hard going because of the heightened awareness of infection control measures that they had to observe. Their lives depended on each other and they trusted their lives with their colleagues.

This SARS crisis has been a great humbling experience where we witnessed the best and worst of human behaviour. Initially, HCWs were shunned and discriminated against, by people from all walks of life, including friends and family members. The media played a crucial role as the bridge between healthcare professionals and the nations in disseminating information and public health education. They forged a better understanding of the disease and the plight of the frontline HCWs; hence the subsequent tremendous public support during this unprecedented crisis.

This psychological impact of SARS on HCWs is unfortunately not well described in the literature. To date, there is only one such article from Canada [20]. Fighting side by side with my colleagues in this microbiological war, especially in the Western Pacific region, where we share many commonalties in our cultures, religious beliefs, socio-economic development and healthcare systems, I was able to empathize with the emotions felt by the HCWs on the battleground. The healthcare community fought together, cared and cried for each other and our patients, who at times were also our comrades-in-arms. The SARS journey in this issue [21] was chronicled from more than 20 publications from Singapore authors in the form of original investigations, abstracts, newspapers, Ministry of Health (Singapore) s press releases and commentaries. It attempts to convey the fears, anxieties, tensions, trials, triumphs and tribulations experienced by the frontline HCWs. It also gave a few glimpses of behind-the-scenes emotional turmoil faced by them.

In Singapore, all SARS patients were managed in a designated national SARS hospital. The previous issue also carried another article from the same SARS hospital in Singapore [22]. It describes the extreme emotional struggles, often with diametrically opposing attributes, experienced by the HCWs during the group psychological support sessions. These 2 papers would hopefully fill a gap in our literature on SARS.

Conclusion

Our SARS experience has occupied an unforgettable place in the history of mankind. One year on, as I reflect on the many sad and joyful moments, I am very touched by the many acts of human sacrifice, love and triumph. To win the fight against SARS, we need to have a dedicated cohesive team, from within and outside the hospitals, from the lowest to the highest ranks.

For the many who helped us survive one of the stormiest journeys in our lives, especially with your prayers, well wishes and tributes that inspired us to fight on and win this battle, the HCWs would like to say a big thank from the bottom of our hearts.

SARS is a deadly disease that respects no borders. It also binds the medical community worldwide through the internet where we share whatever experience and information as soon as we know them such as infection control measures, clinical and epidemiological findings, laboratory diagnosis and management. The mammoth efforts of WHO and Centers for Disease Control in global coordination, communications in providing situation updates and practice guidelines, mobilizing experts to investigate and control outbreaks, and research are very commendable. It was through international collaboration and strong political leadership that the world was able to bring this devastating pandemic under control.

This scourge will go down in history as one of our darkest moments; it was also one of our finest. Very few diseases can cause such a phenomenal impact on HCWs. Within the jaws of death, especially during the initial part of the crisis when we did not even know the etiological agent, an overwhelming majority of HCWs still reported for work everyday. That, in essence, is living the Hippocratic oath.

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