Would SARS become an endemic disease in Hong Kong?

By Dr Kenneth H Lee

Never before has Hong Kong faced the threat of an epidemic as serious as SARS, the so-called severe acute respiratory syndrome. This epidemic is believed to have originated in Guangdong, China, last November in the southern province of Guangdong, China. Chinese doctors said Guangdong officials responded slowly to the disease and neglected to advise Beijing and other parts of Hong Kong to take precautions against contamination. As a result, about 80 percent of the reported SARS cases have been in mainland China. Although researchers at Hong Kong University have swiftly identified a new coronavirus as the possible cause of SARS, the disease is spreading on a country-by-country basis. Before the epidemic abates, there is fear among SARS may be such an emerging epidemic because the virus moves faster than expected. If the virus moves faster than expected, it was too soon to predict the ultimate scope of this epidemic, its prospects for regional curtailment, or whether drugs and vaccines could be made fast enough to halt the disease. But within days, working with specimens from sick patients in early March, the Hong Kong University researchers led by HKU, led some local doctors to suspect coronavirus was identified with the HKU researchers found in one of the cell lines a startling result. Scanning the surface of the cell, they had identified samples of the SARS virus. Within one week of its outbreak, the disease was spreading like wildfire and was carried to more than 12 countries worldwide by rapid global spreading of the disease. The SARS outbreak hit Hong Kong, with 1572 cases of infection reported and a death toll of 150. Hong Kong was hit with the hardest hit, with 1572 cases of SARS. With 1572 cases of infection reported and a death toll of 150. Hong Kong was hit with the hardest hit, with 1572 cases of SARS. With 1572 cases of infection reported and a death toll of 150. Hong Kong was hit with the hardest hit, with 1572 cases of SARS. With 1572 cases of infection reported and a death toll of 150. Hong Kong was hit with the hardest hit, with 1572 cases of SARS. With 1572 cases of infection reported and a death toll of 150. Hong Kong was hit with the hardest hit, with 1572 cases of SARS. With 1572 cases of infection reported and a death toll of 150. Hong Kong was hit with the hardest hit, with 1572 cases of SARS. With 1572 cases of infection reported and a death toll of 150. Hong Kong was hit with the hardest hit, with 1572 cases of SARS. With 1572 cases of infection reported and a death toll of 150. Hong Kong was hit with the hardest hit, with 1572 cases of SARS. With 1572 cases of infection reported and a death toll of 150. Hong Kong was hit with the hardest hit, with 1572 cases of SARS. With 1572 cases of infection reported and a death toll of 19
control capacities, we could be in for a long, difficult race.”

If a cutaneousSVR does develop a seasonal pattern, experts believe that this epidemic may become a recurrent disease such as the 1997 Avian Flu which resurfaced in the form of the H5N1 sub-type to kill six people and infect 12 others in a small flu-dense populated area. Nine cases were children under the age of 10. In March 1999, there were two cases of human infection by the H5N2 strain, also in Hong Kong. Ever since local experts believed that the causative influenza A virus of the Avian Flu may have already found its ecological niche in local avian species and that Bird’s Flu has become an endemic disease.

W ould the same possibility exist with SARS? Now that a new species of coronavirus is proven to be the culprit and it is not found in human, where does it come from? Most experts hint that it may come from animals.

Since the outbreaks of H5N1, which was believed to have been transmitted from Africa’s Green Monkeys to humans in the early 80’s, and the resurgence of Ebola epidemics in Zaire & Uganda in 1989, again a mysterious hemorrhagic fever virus proven to be threatening both apes and humans, experts are now convinced that animal viruses are capable of adapting to humans as infecting hosts through mutation if given time and sufficient contacts. Avian flu is already a good example. It is known that viruses from fowl rarely cross over to humans in the past, but it is known that viruses from fowl rarely use, as this technique is capable of inactivating any contaminating viral particles. Specificity of IG is highly specialised and directed by the identities of previous infections. As a result, IG have been widely used in the treatment of rabies, rabies and Hepatitis B. IG derived from locally collected plasma is regarded as HK community-specific IG. For example, if the donor plasma pool consists of convalescent individuals of atypical pneumonia and bird flu, and 2) To help hospitals in HK to treat emerging epidemics of unknown causative agents. W hat are community-specific immunoglobulins? IG (IG) is circulating antibodies in blood to neutralise foreign pathogens (e.g. viral & bacterial) particles. Specificity of IG is highly specialised and directed by the identities of previous infections. As a result, IG have been widely used in the treatment of rabies, rabies and Hepatitis B. IG derived from locally collected plasma is regarded as HK community-specific IG. For example, if the donor plasma pool consists of convalescent individuals of atypical pneumonia and bird flu, and 2) To help hospitals in HK to treat emerging epidemics of unknown causative agents.

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Should the SARS become endemic, what can we do? Dr Bing W ong, an expert in plasma fractionation from Boston, said for short term solution, he proposed to the Hospital Authority to adopt the Solvent Detergent technique developed by the N ew York Blood Centre to ensure that plasma collected from local SARS convalescent patients are free from any residual SARS infected agents and hepatitis before use, as this technique is capable of inactivating any contaminating viral particles. Specificity of IG is highly specialised and directed by the identities of previous infections. As a result, IG have been widely used in the treatment of rabies, rabies and Hepatitis B. IG derived from locally collected plasma is regarded as HK community-specific IG. For example, if the donor plasma pool consists of convalescent individuals of atypical pneumonia and bird flu, and 2) To help hospitals in HK to treat emerging epidemics of unknown causative agents.

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With the current SARS outbreaks, more than twenty SARS patients in serious conditions were saved using plasma collected from convalescent SARS patients, because this type of plasma contain high titre of SARS-specific antibodies, capable of neutralising the SARS virus. Should the Hospital Authority have moved more swiftly to set up an official protocol for more frontline doctors to apply this plasma therapy to critically ill SARS patients, more lives could have been saved.

But in the end, today’s shrinking global village in which globally transmitted diseases move around constantly, the most effective protective safeguard of public health against any eventual outbreak of epidemics still lies in the setting up of an epidemiics networking system, both nationally and internationally. As Dr AJ, a local public health expert, pointed out earlier, should there be a joint Guangdong and HKSAR communication networking on health issues at all levels (i.e., public health control, identification laboratories, researches and medical treatment, as well as health education), and the recent outbreak of SARS in Hong Kong would have possibly been much better controlled. Under the auspise of W HO, the M ainland along with the province of Guangdong is now in full collaboration with Hong Kong SARS government to set up such an epidemiics communication network. It is late, but better than never.