

Guest Editorial

# Déjà Vu: Surgery and SARS

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March 9, 2003, was a Sunday; 17 years later it is a Monday. I am sitting here in Hong Kong wondering what the future brings. This time 17 years ago I had no idea that we were beginning a week that was going to irrevocably change, in just a few days, the way in which we practiced medicine. We had a big case planned for the Monday list. I was operating with the great Indian orthopaedic surgeon Professor Shekhar Kumta (►Fig. 1). This was one of the girdle tumors we wrote about in this journal some years back.<sup>1</sup>

What we did not know was that just a few weeks before, on Feb 23, 2003, a 64-year-old doctor from Guangzhou had been visiting Hong Kong and stayed at the Metropole Hotel. He had been in contact with several people, including a 29-year-old man who was admitted to the Prince of Wales Hospital on March 4. It is estimated that at least 99 hospital staff, including 17 medical students, became infected while treating that 29-year-old man. That week was like no other I have experienced. On March 12, 2003, World Health Organization (WHO) issued a global alert about a new infectious disease and thus the “severe acute respiratory syndrome” (SARS) was born. Immediate and urgent action had to be undertaken to protect both staff and patients. The Dean of the Faculty of medicine at The Chinese University of Hong Kong, Professor Sydney Chung, talked to the press (►Fig. 2).

In the early days the disease was a mystery. The mode of transmission was unclear, particularly when there was a community outbreak, which appeared to be related to wastewater drainage in a residential tower block. There is no doubt that there were early infections caused by respiratory patients who were having nebulizers to help their breathing. It was later that the need for specific infection control units with controlled airflow was appreciated (negative pressure as compared with the positive pressure in burns units). The mask that Professor Chung was using is the standard three-layer woven mask: this is used when we want to protect against “droplet” infection. According to my microbiologist colleague, Professor Margaret Ip, these masks have the following specifications: they “need to pass

the wet challenge of at least 95% bacterial filtration efficiency (BFE, standard testing using *S. aureus*, with 3 μm droplet size generated and at 28.3 L/mm, ASTM Level 1 masks), and preferably also pass the particulate filtration efficiency (PFE, which uses particles from 0.1 microns) assumingly suitable for virus filtration (ASTM Level 2).” Basically, these masks are best worn to protect others from your droplets because they are not really good enough for health care workers because of the poor fitting of the masks. This is where the N95 mask comes in useful as it is a fitted mask designed to stop close quarter contamination.

Some charts show how hospital activity changed dramatically. In ►Fig. 3 you can see a complete halt in surgical activity for 10 days from March 15 while we worked out what to do. The problem was that our hospital was doing ultramajor surgery and for such cases a postoperative intensive care unit (ICU) bed was needed but all beds were being taken by medical cases (NB this is why when a new hospital was built as few years later two separate ICUs were built on separate floors). Back in 2003 hospitals had to be designated as strictly elective or for all emergencies. In the elective hospitals we were soon able to transfer the big cases requiring microsurgical reconstruction, but triage was very important. Malignant cases were done but congenital and degenerative cases were postponed (►Fig. 4).

Meanwhile staff and patient safety became key issues with designated staff to look at workflow and personal protective equipment (►Fig. 5).

Teaching and training are essential functions to maintain the supply of new doctors required every year. In short order we started online teaching and developed our objective structured clinical examination (OSCE) system for the final year assessment. Over a period of a few weeks attitudes changed and it was very important to keep open lines of communication with the press. There is no doubt that hospitals became “dangerous” places to be avoided if at all possible. ►Fig. 6 compares the outpatient clinic default rate in the time of SARS and the year before.

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Fig. 1 Professors Kumta and Burd, and the plastic surgery team.



Fig. 2 Professor Sydney Chung wearing the standard surgical face mask.

By April we were back to performing ultramajor operations for life-threatening malignancy (► Fig. 7) but also performing more local anaesthetic bedside procedures (► Fig. 8).

► Fig. 9 shows a case of decompression in the time of SARS. Performing surgery on an infective case requires an

even greater level of care. In this case each surgeon, anesthetist, and nurse had their own personal respirator.

We got through SARS but it did need a radical change in the ways we worked. There were also radical changes in the way people behaved with Hong Kong becoming for a period a

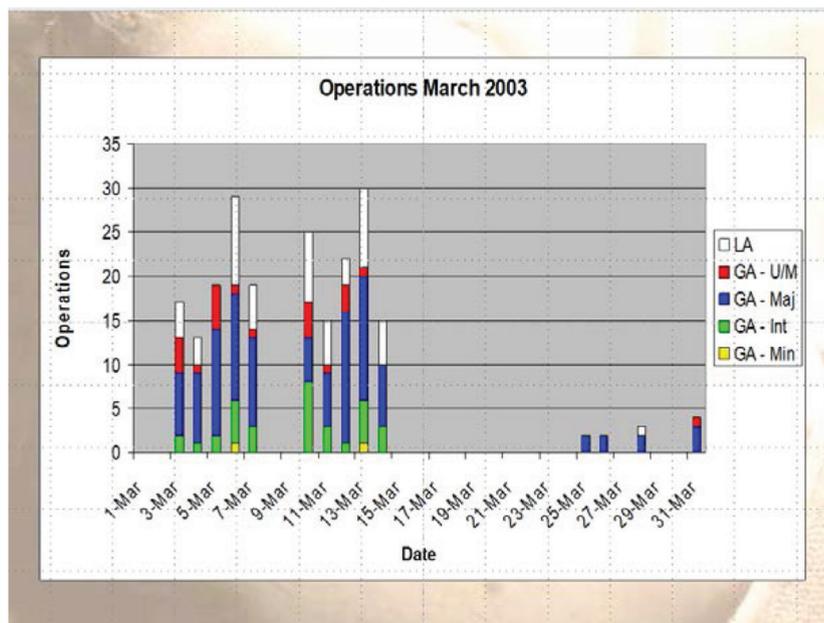


Fig. 3 Surgical operations at a major teaching hospital have to be reorganized.

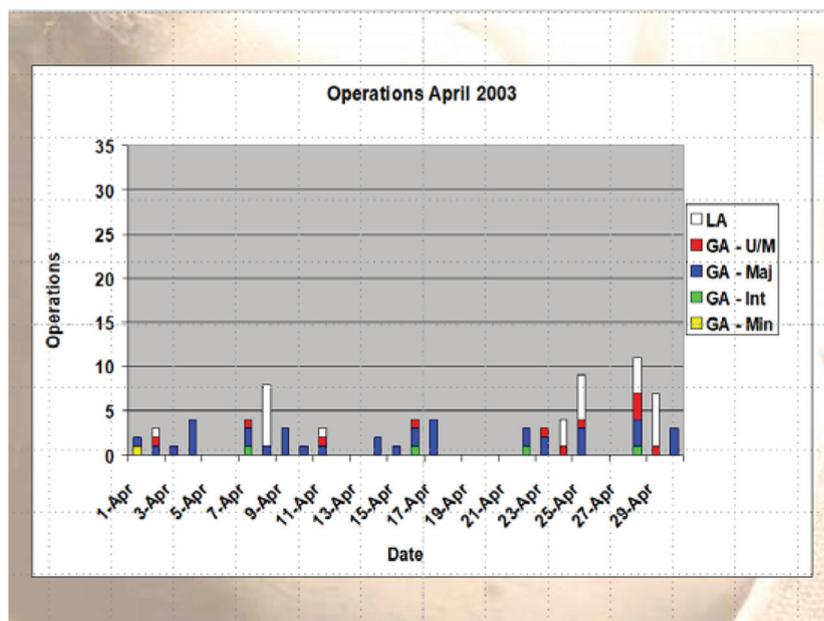
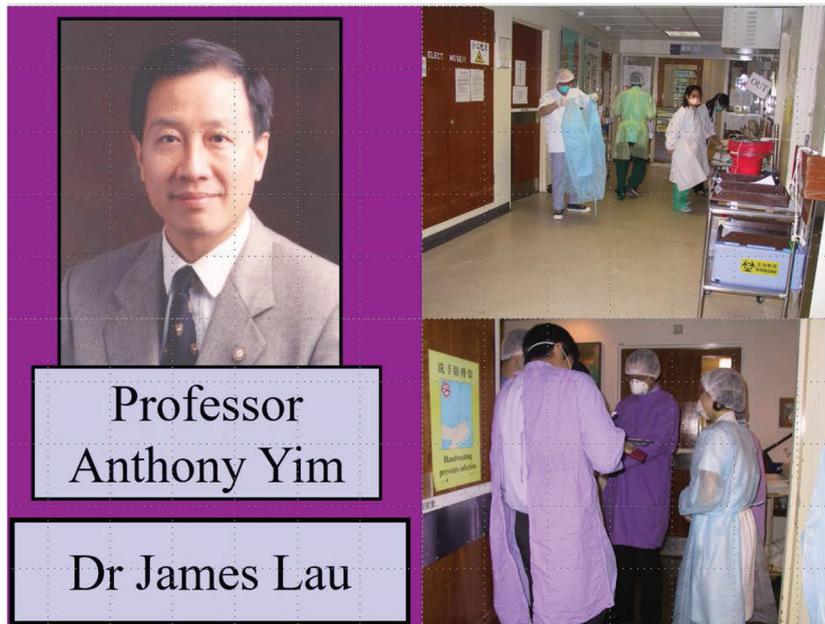


Fig. 4 The following month only dire emergencies and some local anesthetic cases are performed.

ghost city. Coronavirus disease 2019 (COVID-19) is presenting new challenges. It will be essential to keep precautions high and be on the alert for the “superspreaders” and the unusual symptom complexes. In the general population, masks are really being used to remind people to cough responsibly. Once that is understood then focus can be paid to the need for

frequent handwashing and cleaning. Health care workers are at particular risk and must be protected. How countries fare in this current crisis will be a function of the effectiveness of the Public Health discipline but also the honesty of the politicians. This is not a drill. It is the real thing and the fatalities are already mounting worldwide. Take care out there.



Professor Anthony Yim

Dr James Lau

Fig. 5 Disposables versus reusables is an issue when supplies are short.

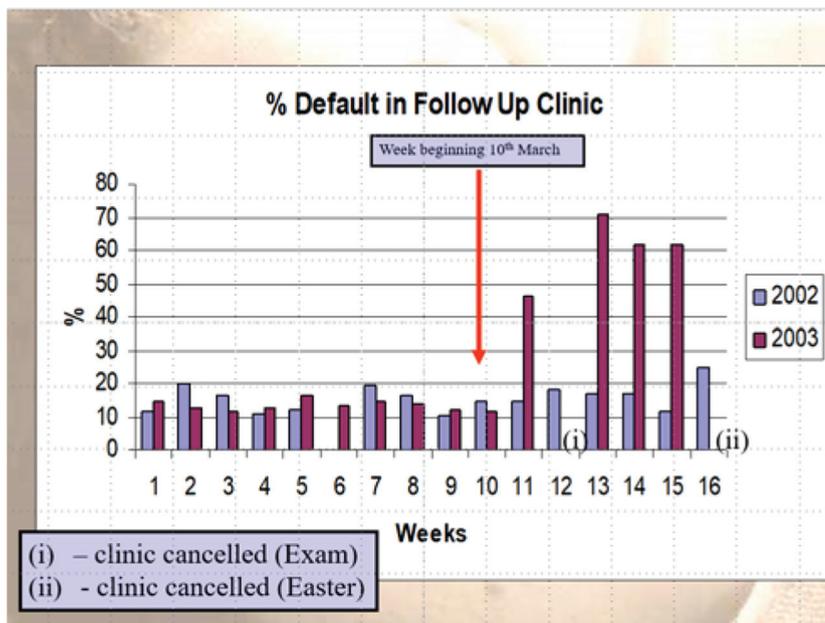


Fig. 6 Clinic defaults.

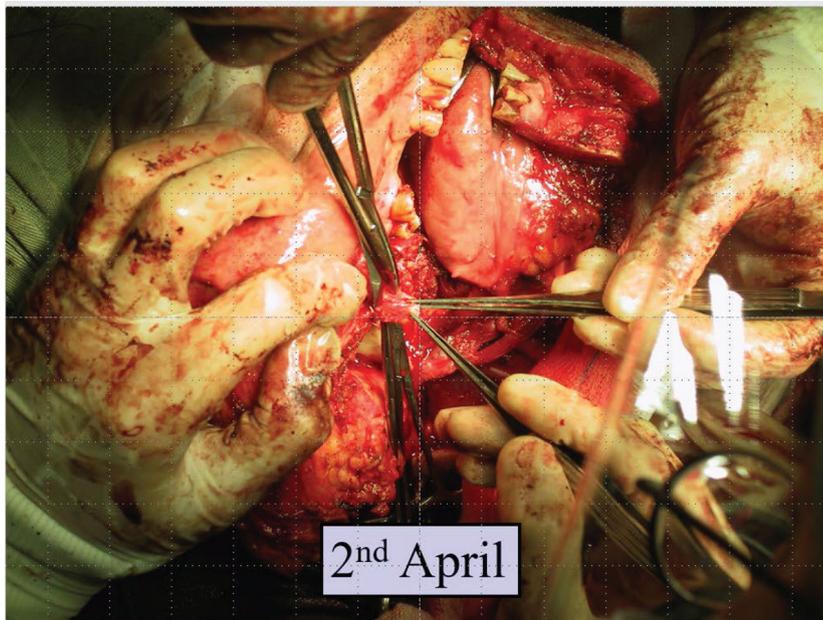


Fig. 7 Hemimandibulectomy.

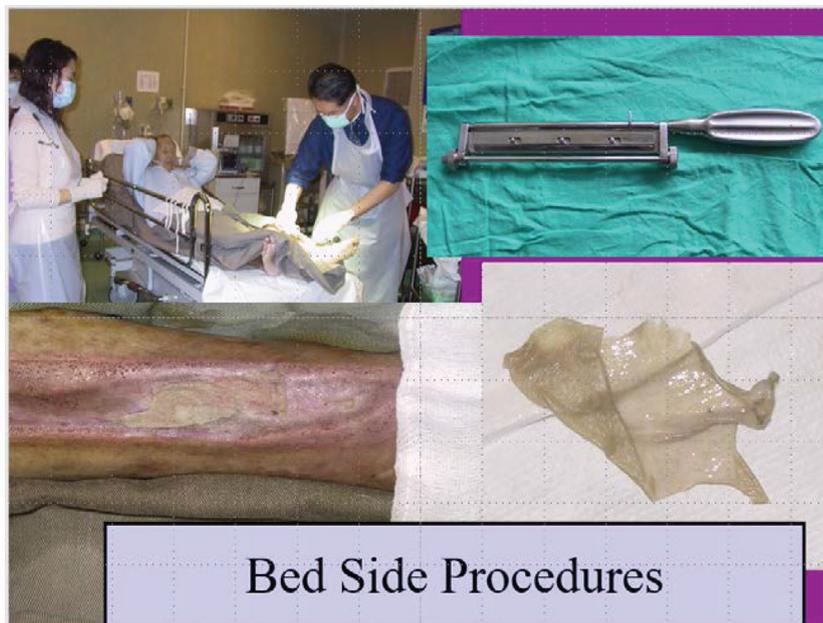
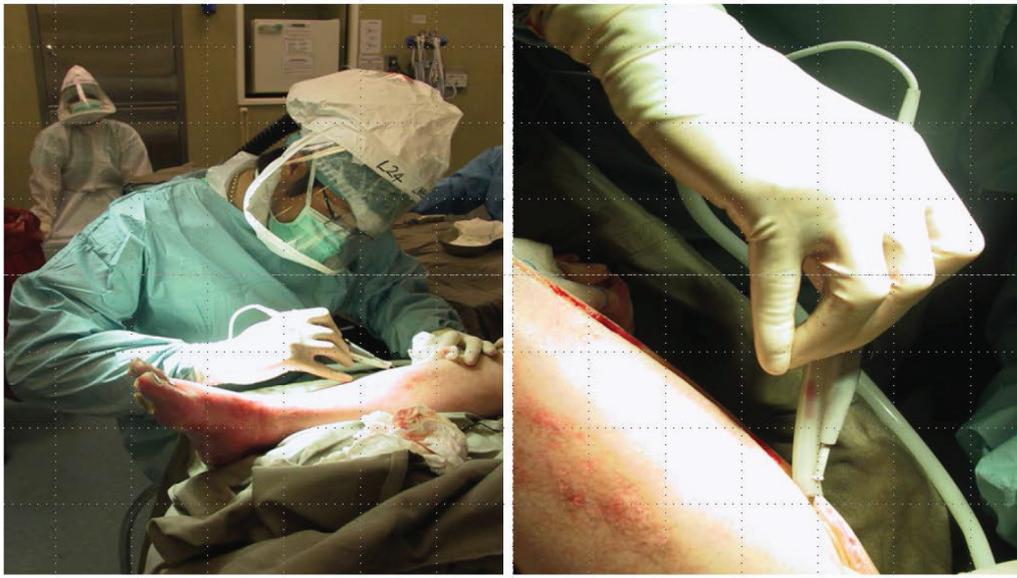


Fig. 8 The "simple" skin graft.



**Fig. 9** Decompression in an acute burn that had occurred in mainland China and had been admitted 36 hours postburn with tense bilateral lower limb swelling. Both legs decompressed. One subsequently needed amputation.

#### **Conflict of Interest**

None declared.

#### **References**

- 1 Burd A, Wong KC, Kumta SM. Aggressive surgical palliation for advanced girdle tumours. *Indian J Plast Surg* 2012;45(1):16–21