Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Correspondence to: Daniel Kwok-keung Ng, MMedSc, Department of Paediatrics, Kwong Wah Hospital, 25 Waterloo Rd, Kowloon, Hong Kong, SAR; e-mail: dkkng@ha.org.hk

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Primum Non Nocere

To the Editor:

We appreciate the editorial by Dr. Filice (June 2004)[1] that accompanied our article on spontaneous pneumothorax as a specific complication of severe acute respiratory syndrome (SARS).[2] We agree with Dr. Filice that the best possible care of the patient takes precedence over the personal well-being of the health-care provider.

During the SARS crisis in Hong Kong, our health-care workers faced a challenge of unprecedented magnitude and responded with selfless endeavor. In the two hospitals discussed in our article, literally dozens of doctors, nurses, and auxiliary staff were stricken with SARS while doing their utmost to care for patients. Two of those providers died. In our very own cardiothoracic surgery team, two colleagues were severely afflicted almost to the point of death, and required prolonged ICU support. Their suffering has been well-documented elsewhere.[3,4] Although routine surgical services were brought to a standstill, emergency operations were still performed in both hospitals for those in need.

Dr. Filice has chosen to highlight the nonsurgical management of the six patients reported in our article as a point of controversy over ethics. We had already mentioned that concern for the safety of health-care workers was only one of several factors in the consideration of surgery in the four patients who did not refuse intervention outright. It was certainly not an overriding concern, and in none of the patients was it the sole factor. As we stated in our article, the high anesthetic risk, the abundant pleural adhesions, and the severely diseased lung parenchyma in these patients all suggested that surgery may be fraught with grave potential complications against which the potential benefits may not be great. Ultimately, the clinical outcomes in none of the six patients were adversely affected by adopting nonsurgical management. Nonetheless, we do agree that had there been a failure of nonsurgical management in these patients, there is no question that surgery would have been offered.

As Dr. Filice correctly pointed out, video-assisted thoracic surgery is now the accepted definitive treatment for primary spontaneous pneumothorax (PSP) complicated by bilateral pneumothorax, recurrent pneumothorax, and persistent air leak, and for selected cases of secondary pneumothorax. As thoracic surgeons and strong proponents of video-assisted thoracic surgery for the treatment of PSP,[5] we are particularly familiar with the indications for surgery. However, as we have discussed in our article, the pneumothorax secondary to SARS may represent a distinct clinical condition, and is certainly unlike conventional PSP. Barring the nightmare of a recurrent SARS epidemic, there are insufficient clinical data to suggest what the optimal management strategy is for patients with SARS-related pneumothorax. Our limited experience thus far demonstrates that in six patients, nonsurgical management offered symptomatic relief with no adverse effect on their final clinical outcomes.

The primary aim of our article was to alert clinicians to the existence of pneumothorax as a discrete complication of SARS, which is a completely new disease entity itself. As such, the protocols for its management warrant careful consideration, not simple transliteration of protocols from PSP. To rush in for surgery while dogmatically citing surgical indications for conventional PSP may possibly have created more harm than good in our six patients, as is sometimes the case for patients with secondary pneumothorax.[6] It would be wise and prudent for clinicians facing such new challenges to remember the famous dictum of Hippocrates: "First, do no harm."

Alan D.L. Sihoe, MB Bchir
Randolph H.L. Wong, MB ChB
Anthony P.C. Yim, MD, FCCP
The Chinese University of Hong Kong
Hong Kong SAR, Peoples Republic of China

Correspondence to: Anthony P.C. Yim, MD, FCCP, Professor of Surgery and Chief of Cardiothoracic Surgery, The Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, Hong Kong SAR, China; e-mail: yimap@cuhk.edu.hk

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To the Editor:

I welcome the clarification by Sihoe et al on the balance between optimal patient outcomes and risks to staff caring for patients with contagious diseases. In their original report on pneumothorax in severe acute respiratory syndrome (SARS),[1] Sihoe et al stated that the risk of transmission of SARS to operating room staff was the most important reason why pneumothoraces were not repaired with surgical procedures. In their letter, they have clarified that physicians are obligated to make management and treatment decisions that are likely to provide the best possible outcomes for patients.

The authors asserted that clinical outcomes in their six patients were not compromised despite the fact that none of the pneu-

mothoraces were repaired. I question how anyone can know that. Two of the six patients died. One 82-year-old woman developed a 20% pneumothorax on the 37th day after hospital admission. She refused chest drainage and died 4 days later. A 32-year-old woman who had been hospitalized for 25 days developed pneumothoraces on both sides of the lung, with one of them displacing 50% of the lung volume. A chest tube was inserted to treat the large pneumothorax, and the lung was reexpanded. The pneumothorax recurred on this side 6 days later, and this was also managed conservatively. The patient developed progressive respiratory failure necessitating mechanical ventilation, which exacerbated persistent air leakage. She then developed refractory hypoxia and died. Four other patients had persistent air leakage for 14 days to 1 month. These patients had substantial morbidity, and it is conceivable that surgical repair of the air leaks would have improved their outcomes. I agree with the authors that it is impossible to know, without a controlled trial, whether surgical repair would have benefited these patients. Expert opinions that were developed in a consensus of experts convened by the American College of Chest Physicians[2] have advised that most or all of the six patients described by Sihoe et al should have undergone thorascopic repair.

The contribution by Sihoe et al is important in that it described pneumothorax in SARS in detail and raised some of the provocative ethical issues surrounding the care of patients with SARS or other contagious diseases. In their original report[1] and subsequent letter, Sihoe et al poignantly described the considerable anxiety that clinicians experienced during this frightening epidemic. Fortunately, experience with SARS and other contagious diseases has demonstrated that strict adherence to modern infection control practices protects staff very well. The authors and I agree that pneumothoraces should be repaired surgically in patients with SARS if such repair is judged likely to improve their outcomes.

Gregory A. Filice, MD
Veterans Affairs Medical Center
Minneapolis, MN

Correspondence to: Gregory A. Filice, MD, Chief, Infectious Disease Section, Veterans Affairs Medical Center, One Veterans Dr, Minneapolis, MN 55417; e-mail: gregory.filice@med.va.gov

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Immersion in Fresh Water and Survival

To the Editor:

Aristotle observed "One swallow does not make a summer." Similarly, the article entitled "Survival After Prolonged Submersion in Freshwater in Florida" that was recently published in *CHEST* (May 2004)[1] lacks predictive value. The report only demonstrates that one victim survived a serious submersion accident. Had the report been properly prepared, it would have been overwhelmed by the literature on drowning survival. Unfortunately, deficiencies in data collection and analysis make the report an anecdote of average value.

A claim for recovery from "prolonged submersion" requires a valid estimation of submersion time. We do not even know the immersion time. The majority of the episode was not witnessed. How much time did the child spend in the water? How much time was spent continuously under water? It is quite possible that the child was not always submerged.

Claims for the benefits of cold water should be supported by temperature measurements. Basic accident scene investigation requires water temperature determination, and it is not provided. Emergency medical technicians (EMTs) failed to measure the victim's temperature at the scene or during transport. The hospital personnel could not measure a temperature $< 26.7°C$.

The authors provide no references demonstrating a protective effect for 26.7°C water on children following prolonged submersion. Two reports that studied drowning outcome in larger groups found that immersion exceeding 10 min was not tolerated even by victims of cold temperatures.[2,3] Core temperatures measured at hospital admission were higher in intact survivors than in those who died or recovered incompletely. Interestingly, one source[4] cited by Modell et al[1] demonstrated that careful testing could detect defects after apparent recovery from prolonged submersion in very cold water.

Did the victim have a cardiac arrest? If so, when did it occur? Pulse detection in cold, wet children may be difficult. The first EMTs "felt a weak pulse" after the rescuers found the child "pulseless." The second EMT team found no pulse. After field treatment, a pulse was felt. Upon admission to the emergency department, "a femoral pulse was palpable."

Was ECG monitoring never performed? One would expect it to have been performed at least during transport in an ambulance and upon admission to the hospital. The evaluation of treatment requires the accurate identification of the condition being treated.

The authors claim that bystander cardiopulmonary resuscitation, advanced life support during transport, and skilled hospital care were "key to the outcome as well." They fail to prove that any of these treatment modalities extend submersion survival even in victims of cold temperatures.

Advancement in the understanding of drowning and its treatment will require careful data collection and analysis from large groups of patients. Unfortunately, the "Recommended Guidelines for Uniform Reporting of Data From Drowning"[5] formed by an international task force do not meet the goals. The guidelines do not require data on duration of submersion, water temperature, victim's temperature at the accident scene, evaluation of bystander resuscitation, and ECG monitoring at the scene or in the hospital. Acceptance of these guidelines would promulgate anecdotes rather than scientific knowledge.

Christopher W. Dueker, MD
Atherton, CA

Correspondence to: Christopher W. Dueker, MD, 37 Ringwood Ave, Atherton, CA 94027; e-mail: chrisduek@aol.com

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