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.

Commentary: Surgery during the Pandemic: Ooh Baby, I Love Your Way

Richard S. Lazzaro, MD, FACS,*,† Byron D. Patton, MD,*,† and Matthew L. Inra, MD*,†

Richard S. Lazzaro, MD, FACS, Byron D. Patton, MD, and Matthew L. Inra, MD

Central Message

Follow the Leader: Continued use of mask mandate, distancing and handwashing along with enhanced postoperative follow-up strategies are essential to mitigate and identify postop COVID 19 infection.

The indications for thoracic surgical interventions have not changed, but we are now faced with balancing the risk that an acquired postoperative COVID 19 infection imparts on the patient. In this month's issue of the Journal, Scarci and colleagues report the impact of acquired postoperative COVID 19 infections on patients who underwent pulmonary resection in the Lombardia region of Italy, "the area most heavily impacted by the Coronavirus pandemic in Europe.[1]

More than a century ago, Evarts Graham and the empyema commission minimized the mortality associated with streptococcal empyema following influenza infection. "The chief factor in reducing the mortality has been the method of treatment"[2,3] which was abandonment of "early open drainage during the pneumonic stage.[2] Yesterday's pandemic mandated observation and treatment change to improve outcomes. While we await the development of specific COVID 19 treatment beyond antibodies, and the projected herd immunity that vaccination and acquired infection will provide, there is still uncertainty of the future because of the transmissibility and virulence of mutant strains of the SARS-CoV-2 virus.

Today's pandemic requires today's surgeons to assess the risk of a surgical procedure versus the risk of non-surgical treatments for patients with thoracic illnesses. Additionally, due to the risk of contracting the virus and a lack of hospital resources, some of today's thoracic surgeons must assess the negative effect treatment delay has on the efficacy of a given treatment and the risk of disease progression. Hattori and colleagues state that "the presence of a GGO denotes an influence on the favorable prognosis of NSCLC".[4] With this statement in mind, a decision to delay surgical treatment for a patient with a GGO, when medical resources are scarce or limited, or the patient is fearful of undergoing inpatient treatment, can be expected to result in minimal risk of stage migration. Minimal disease progression would presumably have minimal negative effect on treatment and survival. However, many patients have more aggressive disease that mandates expedient intervention, and waiting is not an option.

The pandemic has thrust us beyond routine decisions. Operative decisions no longer involve just assessment of resectability and operability. The pandemic has expanded our discussion of risks, benefits and alternatives to include the increased risk of mortality associated with postoperative hospital or community acquired COVID 19 infection in the thoracic surgical patient. Scarci and colleagues have wisely advised "a rigorous post-discharge follow-up should be established, covering a recovery phase of almost 3 months, to early identify any possible signs and symptoms … {and} Improve and develop new models for symptoms surveillance and isolation during postoperative and recovery period".[1] However, our initial responsibility is still to minimize patient risk without delaying treatment, where such a delay would have a negative impact upon that patient due to the natural history of the disease. Understanding that "overall hospital transmission of SARS-CoV-2 in the setting of universal masking is likely rare, even during periods of high community prevalence"[5] and that outbreaks among hospital workers were associated with breakdown in mask utilization, either by workers or by patients who were not masked during clinical care as well as during worker mealtimes,[5] outbreaks in hospital are preventable. With masks on, handwashing and social distancing, staff vaccinations and frequent testing for COVID 19, life-saving and/or life-changing surgery need not be delayed.

*Department of Cardiovascular and Thoracic Surgery, Northwell Health Lenox Hill Hospital, New York, NY
†Donald and Barbara Zucker School of Medicine at Hofstra Northwell, Hempstead, NY

Conflicts of Interest: Authors declare no conflicts of interest exist.

Funding: none

Address reprint requests to Richard S. Lazzaro, MD, Thoracic Surgery, Department of Cardiovascular and Thoracic Surgery, Northwell Health, Lenox Hill Hospital, 130 East 77th Street, 4 Black Hall, New York, NY 10075. E-mail: Rlazzaro@northwell.edu

DOI of original article: http://dx.doi.org/10.1053/j.semtcvs.2021.03.038.

https://doi.org/10.1053/j.semtcvs.2021.04.020

Early experience during the pandemic appropriately led to much postponement of elective surgery as we learned lessons from this new disease. As experience has been gained, WE need to operate on patients during the pandemic. We need to operate safely without unnecessary delay. We need to assess the impact that the pandemic will have on outcomes, secondary to treatment delay or postoperative infection. Leadership expert, John Maxwell, once said, "A leader is one who knows the way, goes the way, and shows the way." *If not Us, then who?* Graham and the empyema commission led by observing a pandemic related disease surge, adjusted the management, and saved many lives. We must also expand our focus and influence from local measures to mitigate SARS-CoV-2 transmission in the postoperative patient and optimization of postoperative surveillance for COVID 19 infection to also include development of hospital infrastructure to provide pandemic-proof delivery of healthcare. Universal societal adherence to the public health practices that we are obligated to follow would necessarily allow healthcare providers to manage illness while society functioned with much less strife and disruption in the event of future pandemics. This is also the way.[6]

REFERENCES

1. Scarci M, Raveglia F, Bortolotti L, et al: COVID-19 after lung resection in Northern Italy. Semin Thorac Cardiovasc Surg 34:726–732, 2022
2. Aboud FC, Verghese AC: Evarts ambrose graham, empyema, and the dawn of clinical understanding of negative intrapleural pressure. Clinical Infectious Diseases 34:198–203, 2002
3. Dunham EK, Graham EA, Mitchell JF, et al: Cases Of Empyema At Camp Lee, Va. Preliminary Report. JAMA 71:443–448, 1918. https://doi.org/10.1001/jama.1918.26020320003010
4. Japan Clinical Oncology Group Lung Cancer Surgical Study Group, Hattori A, Suzuki K, Takamochi K, et al: Prognostic impact of a ground-glass opacity component in clinical stage IA non-small cell lung cancer. J Thorac Cardiovasc Surg 161:1469–1480, 2021
5. Richterman A, Meyerowitz EA, Cevik M: Hospital-Acquired SARS-CoV-2 Infection Lessons for Public Health. JAMA 324:2155–2156, 2020
6. T.A. D'Amico: Commentary: surgery for small cell lung cancer: this is the way. J Thorac Cardiovasc Surg 161:772–773, 2021