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Commentary: Thoracic surgery in COVID-19 patients is not a taboo: A change of mind and correct timing are essential in COVID-19 surgical complications management

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Federico Raveglia, MD

In the last 10 months, with the pandemic advent, thoracic surgeons were forced to split their attention between patients with complications from COVID-19 infection and urgent oncologic cases. The most striking challenge, especially at the beginning of the emergency, was that as hospitals' COVID-19 population increased and resources were stretched thin, surgeons were faced with the need to also provide care for respiratory complications in an unfamiliar infective environment.¹ At the same time, it also has been shown that the development of symptomatic COVID-19 during the postoperative period is a dramatic event highly correlated with death.² Therefore, surgeons have had to bear the brunt of the infection on multiple fronts: dealing with respiratory complications in both medical patients and patients who underwent lung cancer resection. Our area, the Lombardy region, was the most affected in Europe during the first wave, and indeed we were faced with 6 deaths among 12 patients who developed COVID-19 in the postoperative period for lung cancer, as well as many complications in ventilated and nonventilated patients (pneumothorax with ongoing air leak, empyema, chest wall hematoma, and

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In selected patients with COVID-19 complications, surgery is feasible with good outcomes. Delaying necessary surgery because of the potential infective risk can result in a missed window of opportunity.

pneumatocele) and an high proportion (approximately 20%) of infected healthcare providers.

Unfortunately, at the beginning of the pandemic, poor understanding of the actual outcomes of surgery in infected patients encouraged a conservative rather than an operative approach.

Compared with most of the current literature, the strength of the article by Chang and colleagues³ in this issue of the *Journal* is in identifying a pattern of conditions strictly related to COVID-19 that necessitate early thoracic surgery, identifying likely outcomes, and quantifying the risk of developing infection in healthcare providers. Their series of 13 COVID-19 cases with complex situations consisted of severe pneumothorax, spontaneous hemothorax, pneumatocele, and empyema. But what matters most are the authors' brilliant outcomes—77% survival and 69% of cases discharged—suggesting that COVID-19 is not absolute contraindication to surgery. Our experience is similar; indeed, we did not register any infections among surgical staff, and all patients treated for complications of symptomatic COVID-19 were discharged to home except 1 patient with pneumonectomy who was in intensive care for severe pneumonia and sepsis at the time of this report. Notably, this patient was referred to us when this patient's general condition had already worsened and extracorporeal membrane

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oxygenation had been provided, reinforcing the idea that early referral and treatment of complications is advantageous for patients. In our opinion, this is the real key point of the article: as the authors show, thoracic surgery is feasible for patients with COVID-19 and selected complications, but correct timing is mandatory. These patients are usually in poor general condition because of a prolonged COVID-19 course; therefore, at the onset of any complications potentially requiring surgery, this should be promptly considered without further delay owing to the potential infective risk, especially given the authors' demonstration

of very limited risk with correct use of protective personal equipment.

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Commentary: Coronavirus disease 2019 (COVID-19) and the thoracic surgeon: Choose wisely and preserve good judgment

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

Since January 20, 2020, when the first patient in the United States was diagnosed with coronavirus disease 2019 (COVID-19), the United States and health care providers have treated, protected themselves from, adapted to, and learned from the virus that has caused the most significant pandemic of our generation. The pathophysiology of COVID-19 infection and its sequelae has not only required the expertise of internal medicine specialists, but all specialists.

The experience presented by Chang and colleagues¹ describes surgical outcomes of a selected group of patients who had developed complications requiring thoracic surgery. The authors are to be lauded for their work operating,

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

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Sound surgical judgment, patient selection, and operative technique are imperative to operate safely on patients with COVID-19.

healing, and protecting the team. The authors have made an important contribution to the literature, having demonstrated that thoracic surgery can be performed safely on patients positive for COVID-19. We must also remember to stringently assess the risks and benefits of surgery. Some “patients were in progressive respiratory distress that would have resulted in death without surgical intervention,”¹ but did surgical intervention hasten this inevitable outcome? Not all “Hail Mary” passes travel 48 yards with 6 seconds left and result in victory. Predetermining futility is difficult; the decision to proceed with surgery is associated with high

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