Title: Lest we forget

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Abbreviation: SARS-COV-2 – Severe acute respiratory syndrome coronavirus 2

COVID-19 – Coronavirus disease

Abstract

The severe acute respiratory syndrome coronavirus 2 (SARS-COV-2) pandemic has caused shockwaves throughout the US healthcare system. Nowhere has coronavirus 19 (COVID-19) caused more infections than in New York, where there have been over 26,500 infections. Resources have been appropriately allocated towards combating this outbreak, but where does this leave patients with severe non-COVID-19 diseases? Herein we provide the views of a liver transplant surgeon and transplant hepatologist in New York.

As severe acute respiratory syndrome coronavirus 2 (SARS-COV-2) takes its grip on the US and the numbers of hospitalized and critically ill coronavirus 19 (COVID-19) patients rise on an exponential level,[1] it is clear that the healthcare system in almost all states will struggle to meet the demand of critically ill patients. In New York State, the epicenter of the disease in the US at the time of writing, there are over 26,500 patients with COVID-19, and >17,500 in New York City alone.[2] As such, regular hospital functions have all but come to a standstill, with shortages of personal protective equipment, ventilators and redeployment of staff to care for COVID-19 patients taking center stage in the current climate[3]. While the fight to save many of these patients is admirable and warranted in every sense, where does it leave everyone else? Patients with life threating illness such as congestive heart failure, myocardial infarction, acute liver failure, and malignancy have not disappeared off the face of the earth. They still require attention and care, and many of them can, and should, be cared for and saved irrespective of COVID-19.

As liver transplant physicians, we are tasked to look after the sick and dying daily. We are highly specialized in treating a narrow spectrum of severe debilitating life-threating illness that can have astronomical mortality if left unchecked, while in contrast, successful treatment frequently results in enduring and high probability of long-term survival and cure. The resource utilization required to carry out successful liver transplants are however potentially immense – often requiring blood products, critical care resources, and manpower, to name a few. In the times of this unprecedented pandemic, these precious resources are in short supply. As citizens of the global healthcare community, we must carefully consider where those resources are best placed, lest we forget that our patients will still have severe liver disease and will still die without our help. Our skills and expertise have been rendered all but moot, and the unchecked psychological impact of turning down life-saving organs for recipients due to resource utilization for COVID-19 on both patients and healthcare providers is real and seldom discussed. Should we continue to transplant patients and start immunosuppression while potentially exposing them to the virus?[4] Are donor hospitals going to continue to allow for the use of ventilators and critical care beds that are necessary for deceased donor transplants? Can we afford to strain the blood bank at this time when blood

products may very soon be hard to come by? These questions, only asked now in a time of crisis, are our new reality in New York and soon across the rest of the United States.

The psychological and patient survival impacts hold true not only for transplant surgeons and physicians but to other specialties that must make tough decisions that have profound impacts on patients' survivability. In normal circumstances prior to the pandemic, over 20,000 Americans die from both heart disease and malignancy each month,[5] while death from liver disease has increased by 65% in the past two decades.[6] Mortality in cancer and heart disease have only recently decreased,[7] however, in this pandemic and with the massive shift of resources to COVID-19 and away from treatment of these conditions, will these gains be lost, or even worse, reversed? In a world where COVID-19 will be a reality for the foreseeable future, we must decide how we are going to treat and prioritize the remainder of the non-COVID-19 population who would otherwise survive if we were functioning at normal capacity.

One suggestion would be to model ourselves on Hubei province by building dedicated COVID-19 units and hospitals that allow other hospitals to function normally. In the US, we do not have the capacity or the mandate to bus in tens of thousands of healthcare workers to man these facilities but consideration must be taken to the many lives that may be lost inadvertently to the diversion of resources to this pandemic. In this time of crisis, we need to be creative and adapt quickly and often. Regardless of the idea, open lines of communication and collaboration between competing hospital systems and colleagues is crucial to combat this strain on the healthcare system. We must have hospital, regional, and national conversations, consensus, and guidance that are discussed openly and repeatedly adapted to the rapidly evolving climate.

While many of us may be redeployed or repurposed to help our colleagues on the frontlines, we must not neglect our patients who we previously cared for on a daily basis. Lest we forget our patients to whom we dedicated our lives and careers, when SARS-COV-2 finally fades away, we may be facing a second epidemic of all-cause mortality that could have been avoided.

Disclosure

The authors of this manuscript have no conflicts of interest to disclose as described by the *American Journal of Transplantation.*

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