

LETTER TO THE EDITOR

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# Expanding access for COVID-19 patients by transforming a burn unit into a closed-circuit unit for surgical patients: experience from an academic medical center in Jordan

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The current coronavirus disease 2019 (COVID-19) pandemic highlights the importance of a mindful utilization of financial and human resources. Preventing infections and preserving resources and manpower are crucial in health-care. It is important to ensure the ability of the surgeons and the specialized interventionalists to function through this pandemic. A tremendous effort should be achieved to minimize cross-infections in this sector. In addition, more efforts should be conducted to monitor surgical patients diagnosed with COVID-19 because they have higher mortality rates. A study by Lei et al. was conducted retrospectively on 34 patients with COVID-19 who underwent surgery. They reported that all patients developed COVID-19 pneumonia shortly after surgery with abnormal findings on chest computed tomographic scans. Also, they reported that 15 (44.1%) patients required admission to the intensive care unit (ICU) during disease progression, and 7 patients (20.5%) died after admission to the ICU [1].

Another study was conducted in Italy regarding the protocols of dealing with operative patients in the era of COVID-19 pandemic. They recommended that the designated COVID-19 operating areas must be allocated to the operating room closest to the entrance of the theater block entrance [2]. Also, they advised that patients' transit to and from the operating room must be as quick as possible and a

pre-defined direct pathway must be kept as short as possible and away from other patients within the hospital in order to minimize the chances of cross-infection. In addition, they recommended to minimize the number of operators and other staff who should be equipped with personal protection equipment. At the end of the operation and during the recovery phase, the patient must be assisted directly in the operation room until ready to be transferred back to the inpatients place of stay. The time needed to return to wards must be reduced in order to minimize contact between COVID-19 positive patients and the surrounding environment [2]. The role of personal protection equipment was emphasized by Bianco et al. [3]. Another important point is how to stratify elective surgery during the pandemic. Stahel recommended that elective operations can be stratified into "essential", which implies that there is an increased risk of adverse outcomes by delaying surgical care, versus "non-essential" or "discretionary", which implies that there is no increased risk [4]. Moreover, Chadi et al. hypothesized that the minimal-invasive surgery has more advantages in a safe and controlled fashion [5]. However, they recommended ultimately to proceed with technical approaches they are comfortable with to ensure no added risk to the patient and operating room team occur [5].

Theoretically and practically, the aforementioned protocols carry a risk for hospital facilities contamination, and healthcare staff and other admitted patients cross-infection. Patients with COVID-19 are transferred in an "open circuit" even with the maximal strict adherence to the

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and due to the reduced social activity by the quarantine, no burn cases were reported from all Northern of Jordan; which is cover by our center. However, the center has an intermediate care unit which was prepared for any burn case. Now, and after more than 1 month of the first reported case of COVID-19 in Jordan, the number of new cases is zero in Northern of Jordan. Among the surgical patient, no death was encountered and all patients achieved the recovery from the virus. Most importantly, we did not report any cross-infection in the healthcare employees and the other admitted seronegative patient. Figure 1 can demonstrates the blueprint for the burn unit at our center.

Healthcare staff and hospital facilities cross-infections are a major concern which can affect the strongest healthcare systems in the world. The current pandemic of the COVID-19 has a significant risk of viral transmission to healthcare workers who take care of infected patients, with high reported mortality rates [7–10]. Proper management for the resources is very recommended in order to power the healthcare staff against the COVID-19 pandemic. Hill et al. adopted a new model “Corona Curtain” which can be implied for the perioperative management of urgent intubation [7]. The “Corona Curtain” described in this article represents an intuitively pragmatic, simple, innovative and cost-effective approach to attenuating the inherent risk of aerosol exposure with potential transmission of the virus to staff and providers during emergent or urgent intubations [7].

#### Abbreviations

COVID-19: Coronavirus disease 2019; ICU: Intensive care unit

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