

Surgical Management of Traumatic Patients during COVID-19 Pandemic

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Dear Editor

On 19 February 2020, an acute respiratory disease due to the 2019 novel coronavirus (ncov-2019) emerged in Iran. This disease is highly contagious with lethal pneumonia and inconclusive diagnostic tests. There is also no known vaccine or medication available for COVID-19.^{1,2} The infection quickly led to a pandemic in a short period of time.¹ Medical centers have become a center for the spread of this disease due to a surge of COVID-19 patients which puts the health of other patients and health personnel at risk.^{1,3} Following the reopening of many jobs and social centers, the prevalent and mortality rates have become ascending again. This indicates that there cannot be an exact date for the end of the COVID-19 pandemic.¹ To decrease the risk of the transmission of this disease along with the mortality rate in health centers and hospitals, it is essential to manage and control patients' visit, especially in trauma patients.

To manage the risky situation in health centers, it is necessary to pay attention some points such as ; isolation of outpatients or the patients that do not need surgery from trauma patients who need hospitalization and surgery, isolation of trauma patients with COVID-19 from trauma patients who do not have COVID-19, discharging patients after surgery as soon as possible, educated personal preventive cares in hospitalized patients, creating close cooperation between the members of medical teams (including surgeon, anesthesiologist, pulmonologist and infectious disease specialist) and prioritizing treatments of patients.^{1,4-7}

To make decision about trauma patients who need operation, including orthopedic patients, four factors should be considered:

1-Type of trauma: Injuries that threaten life or the limbs of the patients, have a high priority for surgery.³ In particular

during pandemic, acceptable non-surgical (conservative) treatment and minimum hospitalization time and indirect follow-ups is strongly recommended.^{1,7,8}

2. Risk of COVID-19 and severity of symptoms in patients: It is important to consider the risks of exacerbation of latent COVID-19, appearance of clinical symptoms in asymptomatic patients, and even an increase in the mortality rate of the disease after operation.⁸ Therefore, being affected by the COVID-19 disease is a negative factor for surgical performance. Patients with clinical symptoms of pneumonia or high risk of developing the disease due to exposure to COVID-19 should be isolated and the operation should be postponed if possible.^{1,3,9} Asymptomatic Patients or those who have not been in contact with COVID-19 patients or places that these patients have been kept during the previous 14 days can receive definite surgical treatment without delay.⁹

3. Risk factors of the lethal form of COVID-19 pneumonia: Patients aged above 50 years, or those with pulmonic diseases, cardiovascular or cerebrovascular diseases, hypertension, diabetes, malignancies, and those with immunity system problems are at higher risk of the lethal form of COVID-19 pneumonia.² Trauma patients who have been infected or are likely to have been infected with COVID-19 should receive acceptable non-surgical treatment or if not possible, it is better to receive surgical treatment after all symptoms of COVID-19 have been resolved.^{2,5}

4. Due to the COVID-19 pandemic, there is a shortage of Intensive Care Units (ICU) beds and blood resources for blood transfusion. Therefore, ICU beds and blood resources should be reserved beforehand for COVID-19 patients with risk factors. In addition, lack of consumable and disposable equipment in particular in operation rooms is another concern that should be taken into account.^{7,9,10}

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