


Suggestions for triage and surgery strategies for maxillofacial trauma during COVID-19 outbreak

COVID 19 salgınında, maksillofasyal travmalı hastaların triajı ve ameliyat stratejileri için öneriler

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SUMMARY

Maxillofacial traumas can be accompanied by other traumas, while it can be presented in isolation. In patients with pure trauma, maxillofacial surgery is directly related to the risk of high COVID-19 (SARS-CoV-2) transmission, and the decision of surgery during the pandemic process should be given carefully. In the pandemic process, only performing actual maxillofacial emergency surgeries and postponing elective surgeries would reduce the likelihood for both the patient and medical personnel to be infected with this directly aerosol-transmitted agent. In this period when we are facing a global problem, it is important to protect health care personnel from this factor as well as patients.

Keywords: COVID-19, Maxillofacial Trauma, SARS-CoV-2

ÖZET

Maksillofasyal travmalar, başka travmalara eşlik edebileceği gibi, tek başına da prezente olabilir. Salt travması olan hastalarda, maksillofasiyal cerrahi, yüksek COVID-19 (SARS-CoV-2) bulaşma riski ile direkt olarak ilişkili olup, pandemi sürecinde ameliyat kararı, dikkatli bir şekilde verilmelidir. Pandemi sürecinde sadece, gerçek maksillofasyal acil ameliyatlarının alınması, elektif ameliyatların ertelenmesi, hem hastanın hem de sağlık personellerinin direkt aerosol ile bulaşan bu etken ile enfekte olma olasılığını azaltacaktır. Global bir sorun ile karşı karşıya kaldığımız bu dönemde, hastaları olduğu kadar, sağlık personelinin de bu etkenden korumak önemlidir.

Anahtar sözcükler: COVID-19, Maksillofasiyal Travma, SARS-CoV-2

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Letter to Editor;

COVID 19 (SARS-CoV-2) infection has been declared "pandemic" by the World Health Organization since March 11, 2020. While the current pandemic process forced the health system service delivery capacity, in addition to the examinations and treatments of COVID 19 patients, emergency services and trauma assessment services were also provided. Due to the application of a curfew for individuals over the age of 65 and under the age of 20 and switching to home office work conditions in various institutions, there have been changes in the distribution of trauma patients who applied to emergency departments in general. The reduction of occupational accidents, traffic accidents and assault rates have led to a decrease in maxillofacial traumas. The maxillofacial region consists of complex tissues, both soft tissue and hard tissue (bone). While injuries can only include bone, or only soft tissue, there could also be damage to both tissues in a complicated way ¹. Because the facial area is an extreme vascular region, arterial bleeding can lead to abundant blood loss, partial fractures can narrow the airway, causing respiratory distress. Acute Respiratory Syndrome Coronaviruses-2, as the name suggests, increases the damage of such tissues and their predisposition to infection due to its involvement in the respiratory system ^{2,3}.

Since having open wounds also weakens the immune system, the protection of these patients becomes extra important. In the literature, studies conducted in the short period have shown that there is a high viral load in the nasopharynx and nasal cavity during COVID-19 infection.

During maxillofacial surgery, the patient's nasal or oral intubation, the washing process accompanied by the drill during the fixation phase with the plaque screw is a great risk for medical personnel. During pandemic, surgeries containing the upper aerodynamic pathway in all hospitals across the country were cancelled unless they had urgency such as respiratory distress. Because, after these traumas, the main danger is that the mouth, nasal mucosa and pharynx become open to aerosols infected with COVID. Elective planning of cases, preoperative, COVID PCR analysis of patients

and computerised lung tomography (CT) will allow them to be operated more safely.

In maxillofacial trauma, under normal conditions, due to the multidisciplinary of case management, approach of clinics to such cases differs. However, during the COVID outbreak, this study was written to reach a common treatment approach by maxillofacial surgeons all over the country.

Our suggestions for reaching common approaches are as follows;

- 1- During the first admission to 112 emergency departments, to bring maxillofacial patients to to clean hospitals instead of pandemic hospitals,
- 2- To begin the first treatment of the patient with an isolated history of maxillofacial trauma at the address without bringing to the hospital because there is no additional trauma, if there is no respiratory distress, especially taking care that patients over 65 years of age are treated without the need to be brought to the hospital,
- 3- To ask for x-ray or CT only for patients for whom it is necessary during the first admission. If necessary, to take the films by radiology centers using appropriate protection equipment due to the risk of being infected with COVID-19,
- 4- To perform stabilizations with tight bandages if possible, if not with methods such as Intermaxillary Fixation (IMF) screws or interdental wiring techniques, under local anesthesia in local operation rooms ³,
- 5- To leave nasal fractures, zygomatic bone fractures without condyl pressure, orbital lateral wall fractures, orbital floor fractures without diplopia, parasymphyseal mandibula bone fractures, intraoral and tongue lacerations to secondary recovery,
- 6- If the patient has no open, life-threatening bleeding - no damage to glob or lacrimal gland, if there is no damage to the nervus fascialis, to consider surgeries as elective and to postpone,
- 7- To carry out emergency cases under measures to protect both patient and anesthesia and surgical personnel due to the threat of high aerosolization ⁴ (Protective equipment such as N95 Mask, gloves, glasses etc., sterile covering, intubation under appropriate conditions, the room being under negative pressure, operational waste output suitable for the discharge of gas output),

8- To use shields in addition to N95 masks while operating COVID-19 positive or suspected patients, especially when using cautery, drill etc. that create aerosol and surgical smoke ⁵,

9- There are studies in the literature reporting that SARS and MERS are highly sensitive to rinsing with Povidone, that the virucidal effect lasts an average of 3 hours and can reduce the viral load in the saliva. The effect of covering the oral and nasal cavities of both the patient and the surgical team to Povidone Iodine, for protection in COVID-19 positive patients with emergency surgery indication ⁶,

10- To terminate surgeries in the shortest and most effective way during operations to protect the medical personnel from aerosol and, to shorten the time the patient is attached to the ventilator,

11- To discharge the patient in the earliest postoperative period after maxillofacial stabilization,

12- After discharge, to keep these patients resting in an isolated room if possible in their homes against the threat of oral and nasal aerosol always with a mask and, to teach oral care.

Delaying operations after maxillofacial trauma can lead to more cosmetic, rarely functional damage. However, after COVID-19 infection, clinical figures leading to multiple organ failure may be the cause of mortality after any surgery. This document includes our recommendations on providing appropriate strategy for recognizing and treating such trauma patients quickly and in the most practical way, and what can be done in existing pandemic conditions to mitigate the impact of COVID-19 on these patients. As pandemic continues, treatment algorithms can be further improved for patients with maxillofacial trauma.

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