

# Trauma Management During and After COVID-19

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We have read with great interest the editorial written by our colleagues from Italy. Their work covers many strategical, tactical, and even, from our point of view, philosophical aspects of trauma care during the COVID-19 pandemic. The recent situation is proving time after time, country after country, that any unexpected pandemic event deals a major "blow" to even the best national health care systems in the world.

It cannot be argued against that we have much to learn, both from each other and certainly from previous experiences. We watch and learn about what can be done now, taking into consideration that the situation is changing daily. We look optimistically forward, watching the effects of government measures, and we are still amazed by the situation.

We completely agree with Dr Coccolini that COVID-19 is, per definition, a mass causality incident. In Israel, we have probably one of the most developed countrywide preparedness plans for mass causality events. This national program was developed on the basis of extensive experience in trauma mass casualty incidents. The strategy is based on very strict rules of central control, early army and Home Front Command involvement, regulations for all essential and pre-hospital services as well as multiple logistics [1]. One of the most important cornerstones of this policy is that of being prepared in advance, creating a "war tactical plan" for the skilled primary and early secondary triage manpower among the hospitals [2]. This plan has always succeeded in preventing such situations when hospital capabilities could not deliver optimal individual care. Every Israeli public medical center has its own plan based on hospital capacities, their geographic in-hospital locations, the presence of professional staff, and much more [3]. Annual training at each hospital is mandatory by governmental law.

Unfortunately, such a plan does not routinely exist during times of pandemic. As with many things, our medicine should learn from trauma surgery and several recommendations may be obtained from the literature and the experience from recent mass casualty incidents [4]. We would be happy if Dr Frederico could let us know whether such a strategy exists in Italy and whether he knows of any inter-hospital regulations. It is clear to us that even multiple-bed hospitals do not have enough experienced staff to ventilate many patients simultaneously. We would also like to take this opportunity to ask Dr Coccolini's opinion concerning which medical personnel he thinks are most appropriate to do this job when there is a shortage of intensivists and internal medicine experts? Is there a plan for the relocation of staff, moving them in from another hospital? In Israel, there is a dissonance between the expertise and skills of the seniors in tertiary hospitals in comparison with smaller medical centers, but there is a plan to fill the void in the case of an emergency. We would like to know whether in Dr Coccolini's hospital, and maybe throughout the country, such plans were developed as the epidemic worsened.

In our opinion, our civilization has never met and has never planned for such a scenario, and we must draw some conclusions for the future. Specifically, concerning trauma care, the best situation for trauma patients today is where we can separate clean and infected patients. However, nowadays, a hemodynamically unstable victim of a stabbing does not provide us this "luxury" situation. In such a situation, do you regard these trauma victims as corona virus infected patients until proven otherwise? Furthermore, it will be very interesting to learn from your experience about whether you are practicing endovascular and hybrid trauma techniques these days. Such procedures are certainly considered time-consuming, especially while working in a busy trauma center, performing a whole body computed tomography for trauma several times daily. We would therefore like to know whether your hospital has changed the routine indications for imaging.

In your very interesting editorial you have raised a philosophic question to which we have no answer, whether the most experienced trauma surgeons should be "treated with silk gloves." It would probably be interesting for our readers to know how you have defined the necessity of their involvement.

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© 2020 CC BY 4.0 – in cooperation with Depts. of Cardiothoracic/ Vascular Surgery, General Surgery and Anesthesia, Örebro University Hospital and Örebro University, Sweden Finally, we would really like to praise the authors of this manuscript who found it possible to share with us their "hopefully unique" experience in these very difficult times.

# **Ethics Statement**

- (1) All the authors mentioned in the manuscript have agreed to the authorship, read and approved the manuscript, and given consent for the submission and subsequent publication of the manuscript.
- (2) The authors declare that they have read and abided by the JETVM statement of ethical standards including rules of informed consent and ethical committee approval as stated in the article.

### **Conflicts of Interest**

The authors declare that they have no conflicts of interest.

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