

Cardiovascular surgery in the COVID-19 pandemic

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Coronavirus disease 2019 (COVID-19) is a remarkably challenging health issue that provoked all the health-care providers to contemplate some measures about the situation. All the health-care workers frontline (esp. emergency service, pulmonologists, infection disease specialist and anesthesiologist) have produced recommendations on prevention and taking care of COVID-19 patient (1,2). Whereas, at the second line another important issue is the ongoing healthcare for the continual disease situations.

There are two main critical issues on cardiovascular surgery in this pandemic. Firstly, to delay the elective surgeries is essential to sustain the health-care service. Elective case triage is trickier for cardiovascular procedures which are relatively progressive conditions. Definitive decision to defer a procedure should be made regarding firstly to the capacity of health-care system, and then availability of surgical/anesthesia staff, intensive care unit beds, need for isolation beds, ventilators, cardiopulmonary bypass machine, extracorporeal membrane oxygenator, supplies such as sutures, grafts, valves and blood and blood product availability. The patient status should be taken into account to defer or to perform the procedure, as well. Therefore, we developed “Level of Priority” (LoP) statement for cardiovascular procedures (3). Elective cases are defined as LoP I that may be postponed as much as possible. LoP II to IV cases should be reconsidered by individual basis by “Heart Team”. The situations that can be managed by percutaneous coronary intervention, endovascular procedures and etc. may be handled by non-operative manners.

The second one is the personal protection equipment and infection measures while dealing with a suspected / confirmed COVID-19 patient. It is obvious that a suspected / confirmed COVID-19 patient ought to be assessed with specific measures for any medical or surgical intervention. Personal protection equipment (PPE) is the most crucial measure during the pandemic. It is recognized that many centers are facing PPE shortages and there are recommendations to re-sterile the masks to be effective for reuse.(4) More measures should be taken into consideration for sterile environment such as surgical procedures. Some added measures such as face shield may be recommended for surgical procedures. The surgical team who scrubbed in, must wear extra equipment such as surgical coat and double gloves. It may be recommended to fix the long-sleeve gloves to the surgical coat by adhesive drapes (3). It is obvious that this kind of working environment with all this equipment is challenging, sometimes irritating and disquieting. One other big problem is the fraught feeling of health-care providers to be diseased or to be contagious for their family. Therefore, health-care providers may need enormous support for burnouts during the pandemic.

The other measures such as preparation of the operating room (OR), anesthesiologic management, transportation of patients and disinfection of OR were discussed in the referring article (3).

In conclusion, it is important to assess the “Level of Priority” for surgical procedures to support the service of health-care facility. More than that, whole surgical team should be protected by adequate PPE and should take the time to get full protected.

References

1. Meng L, Qiu H, Wan L, Ai Y, Xue Z, Guo Q , et al. Intubation and Ventilation amid the COVID-19 Outbreak: Wuhan's Experience. *Anesthesiology* 2020. [Epub ahead of print] doi.org/10.1097/ALN.0000000000003296
2. Wilder-Smith A, Chiew CJ, Lee VJ. Can we contain the COVID-19 outbreak with the same measures as for SARS? [published online ahead of print, 2020 Mar 5]. *Lancet Infect Dis.* 2020 doi:10.1016/S1473-3099(20)30129-8
3. Mavioğlu Levent H, Ünal Utku E, Aşkın G, Küçükler Alp Ş, Özatik Ali M. Perioperative planning for cardiovascular operations in the COVID-19 pandemic. *Turk Gogus Kalp Dama* 2020 [Epub ahead of print] doi:10.5606/tgkdc.dergisi.2020.09294
4. Recommended Guidance for Extended Use and Limited Reuse of N95 Filtering Facepiece Respirators in Healthcare. Available at:<https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.html>. Accessed April 4, 2020