Response to Comments

Reply to comments on prone CPR for COVID-19 patients

We thank Raphael PO[1] for his interest in the guidelines for comprehensive cardiopulmonary life support (CCLS) for suspected or confirmed corona virus disease (COVID-19) patient,[2] and his suggestion for the need of prone cardiopulmonary resuscitation (CPR). Proning is a usual practice to improve the respiratory status of the COVID-19 patient by lung recruitment. We agree that prone CPR may be 'an option' in patients with an advanced airway *in situ*. In the absence of a secure airway, however, prone position makes airway access extremely difficult and enhances the risk of aerosolisation.[3] Also, wherever proning is performed as a routine for management of COVID-19 patient, the delay to turn to supine position for CPR would be minimal as the team is likely to be well versed with it. The patient deserves the best attempt and most of the training related to CPR across the globe is being imparted in the supine position. So, to provide skill-based technique in a changing environment of COVID-19 for which the health care worker has not been trained appears impractical. Also, identification of the correct site for cardiac compressions in prone position is not well known and difficult to locate too. Using the inferior angle of the scapula for correct site identification may not be correct because it changes position if the arm is abducted as happens in the prone position. The largest left ventricular cross-sectional area is reported to be 0-2 vertebral segments below the inferior angle of the scapula in at least 86% of patients.[4] The remaining 14% therefore would be getting suboptimal care even if the patient is thin built and the bony landmarks are easily palpable which may not be true in obese patient. There is no consensus regarding the placement of hands also.[5] For effective compressions, a sandbag is required under the sternum for which the patient would need to be moved anyway.

The author has conceded that the outcome of prone CPR is not well elucidated and hence Indian Resucitation Council (IRC) emphasised the standard technique. CPR guidelines from other resuscitation councils also have not categorically mentioned CPR in a prone position always.[6] It is emphasised that CPR may be started with the patient in prone position till the team prepares for making patient supine to avoid delay in starting CPR.

So, we are of the opinion that the standard CPR as per the CCLS guidelines would have a better and safer outcome than an unconventional prone position CPR where determination of the precise level of compression and the position of hands is nowhere near the level of universal acceptance as the standard supine position CPR.

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Conflicts of interest

There are no conflicts of interest.

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REFERENCES

1. Raphael PO. A comment on "Indian Resuscitation Council (IRC) suggested guidelines for Comprehensive Cardiopulmonary Life Support (CCLS) for suspected or confirmed coronavirus disease (COVID-19) patient". Indian J Anaesth 2020;64:827.
2. Singh B, Garg R, Chakra RaoSSC, AhmedSM, DivatiaJV, Ramakrishnan TV, *et al*. Indian resuscitation council (IRC) suggested guidelines for comprehensive cardiopulmonary life support (CCLS) for suspected or confirmed coronavirus disease (COVID-19) patient. Indian J Anaesth 2020;64:14;91-6.
3. Bhatnagar V, Jinjil K, Dwivedi D, Verma R, Tandon U. Cardiopulmonary resuscitation: Unusual techniques for unusual situations. J Emer Trauma Shock 2018;11:31-7.
4. Kwon Min-Ji, Kim EH, Song IK and Lee JH. Optimizing prone cardiopulmonary resuscitation: Identifying the vertebral level correlating with the largest left ventricular cross-sectional area via computed tomography scan. Anesth Analg 2016;124:520-3.

5. Al Harbi MK, Alattas KA, Alnajar M, Albuthi MF. Prone cardiopulmonary resuscitation in elderly undergoing posterior spinal fusion with laminectomy. Saudi J Anaesth 2020;14:123-6.
6. Edelson DP, Sasson C, Chan PS, Atkins DL, Aziz K, Becker LB, *et al*. Interim guidance for basic and advanced life support in adults, children, and neonates with suspected or confirmed COVID-19. Circulation 2020;141:e933-43.

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