Instant oxygenation after tracheal intubation in patients with COVID-19

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Received: 18 June 2020 / Accepted: 20 June 2020 / Published online: 29 June 2020
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Keywords COVID-19 · Tracheal intubation · Airwayscope® · The aerosol box

To the editor:

Tracheal intubation in a patient with COVID-19 should be carried out as quick as possible, to minimize infection of the staff by viral aerosol coming out from the patient. Some recommend using an “aerosol box”, as a part of personal protective equipment (PPE) [1, 2], but this may make tracheal intubation difficult [2]. The use of a videolaryngoscope is recommended, but the efficacies of different videolaryngoscopes can be different. Our simulation study [3] has indicated that the Airwayscope® (Hoya, Tokyo, Japan) was most effective in reducing intubation time.

Another major problem is that the delay in tracheal intubation would increase the risk of cardiac arrest, because patients with COVID-19 are frequently having respiratory dysfunction and are already hypoxic. Therefore, immediate oxygenation after tracheal intubation is desirable. We suggest a method to achieve this.

When a Macintosh laryngoscope or a videolaryngoscope without a tube guide is used, a stylet may be required. In such a case, after successful intubation, it is necessary to remove the stylet, and to connect a heat and moisture exchanger and a breathing system. During these procedures, it is not possible to provide oxygen, in addition to exposing an assistant to viral aerosols. In contrast, when a videolaryngoscope with a tube guide (such as the Airwayscope®) is used, a stylet is not required, and thus a heat and moisture exchanger as well as a breathing system can be kept

connected during tracheal intubation (Online Fig. 1). Once the tube is inserted to the trachea and the cuff inflated, oxygen can be given immediately. This method, which does not require an assistant to stand near the open space of the aerosol box, would minimize the risk of hypoxia-related cardiac arrest (Online Fig. 1).

Funding None.

Compliance with ethical standards

Conflict of interest The author declares that there is no competing interest.

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Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Electronic supplementary material The online version of this article (<https://doi.org/10.1007/s00540-020-02818-3>) contains supplementary material, which is available to authorized users.

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