Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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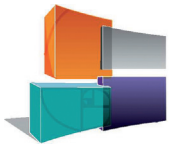

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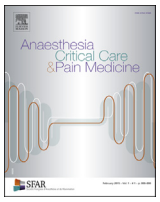

Letter to the Editor

A safe-distance technique for orotracheal intubation using trachway intubating stylet in the airborne isolation room

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Dear Editor,

A negative pressure isolation room (NPIR) is a single-occupancy patient care area developed to isolate airborne pathogens to a safe containment space. One of its distinctive features is the direction of air flow from feet to head of the patient so that the air supply would first flow through healthcare workers (HCWs) before it reaches the patient's head (i.e., potential infection source), which is close to the air exhaust [1]. Therefore, for HCWs, standing behind the patient's head is strongly discouraged, as it would not only impede airflow, but also expose themselves to the source of infection [1].

Tracheal intubation (TI) with mechanical respiratory support is the last resort for patients with respiratory failure. With the global spread of coronavirus disease 2019 (COVID-19), there is an ever-increasing number of patients isolated in NPIRs requiring TI as a life-saving procedure. For HCWs with personal protective equipment (PPE), TI for patients in this particular setting remains a high-risk procedure during which blood, secretions, droplets and aerosols may be widely shed. Besides, positioning themselves behind the patient's head in close proximity to the patient's airway during TI in NPIR further increases the risk of pathogen exposure, knowing that the airflow is directed toward the operator. The limited protection offered by PPE for HCWs has been highlighted by the findings that the current Centers for Disease Control and Prevention (CDC) algorithm is insufficient to protect HCWs from contamination during PPE removal [2,3].

With the introduction of a variety of novel videolaryngoscopic devices, TI can be achieved with the operator standing next to the patient to avoid the conventional behind-the-head position [4]. The new-generation Trachway video stylet (Trachway, Markstein Sichtec Medical Corporation, Tai-Chung, Taiwan) consists of a malleable video stylet and a detachable monitor that allows real-time wireless image delivery. Here, we demonstrated a safe-distance technique for TI using the Trachway intubating stylet (video 1). First, the video monitor was detached and placed on the right side of the patient. While standing on the left side of the patient, the operator held Trachway in his right hand. After opening the hypopharyngeal space with jaw thrust technique by an assistant who stood on the right side of the patient (not shown), the stylet was introduced into the oral cavity. The operator, who was holding the device by its handle, then located the positions of the epiglottis and laryngeal inlet by putting the structures under direct vision of the camera at the tip of the stylet. If required, the BURP (The Backward, Upward to the Right Pressure) technique can be used to apply gentle pressure on the larynx with the operator's left hand to facilitate visualisation. When the tip of the stylet was positioned at or below the glottis as shown on the wireless monitor, the tracheal tube was then advanced into the glottis over the stylet under direct vision.

Because airway management techniques such as bag valve-mask ventilation or TI may cause aerosol spread, rapid sequence induction is recommended for patients infected with COVID-19 [5]. Our experience with the general population showed that the safe-distance TI technique can be successfully performed within 30 s in experienced hands. We suggest that this technique may be considered when tracheal intubation is required in the negative pressure isolation room for patients with potential or confirmed COVID-19 infection.

Conflicts of interest

No external funding and no conflicts of interest declared.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.accpm.2020.04.021.

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