Letters to Editor

Impact of aerosol box on anxiety of the anaesthesiologist for intubation during COVID-19 pandemic: A single-blinded observational study

Sir,

Reports of healthcare workers (HCWs) getting infected during the coronavirus disease-19 pandemic are disturbing and tragic. The risk posed to HCWs especially anaesthesiologists during aerosol generating procedures (AGPs) is critical. Innovation of the aerosol box (AB) (made of acrylic or transparent polycarbonate sheet) may help to address this issue.[1] AB is a transparent plastic cube designed to cover a patient’s head and has two circular ports through which the clinician’s hands are passed to perform the airway procedure. It is a barrier device useful as an anti-splash or against direct cough from patient into the face of the proceduralist.[2] We conducted a survey from July 2020 to December 2020 to evaluate whether the AB really played a vital role in allaying anxiety of the anaesthesiologist regarding the risk of direct aerosol exposure or was it a hurdle in smooth working. The survey was distributed to experienced anaesthesiologists, who were routinely doing cases in general anaesthesia. After prior consent, we distributed the online survey to anaesthesiologists through their institutional emails, social media and WhatsApp messenger in our city. No data which could breech personal information was collected. They filled the questionnaire which enquired about their awareness, experiences, adventures and misadventures during induction and extubation with the AB [Table 1].

Ninety anaesthesiologists responded to the survey questions. Only 29.60% of the participants had prior experience with the AB [Table 2]. Almost 70.40% of the study population was unaware of the use of this innovative barrier device. 46.30% participants came to know about AB from colleagues, whereas the rest came to know from social media and other sources. Thus, the results depicted that no first-hand experience or training for anaesthesiologists was present prior to using this box. 11.10% of the participants had an overall nice experience with use of AB while performing intubation and 85.20% felt that though it was helpful, it was a hurdle for intubation. 3.70% of the participants found it to be hazardous. Bag and mask ventilation was found to be easy by 14.80%, while 57.40% found bag and mask ventilation difficult with use of the box [Table 2]. Ease with endotracheal intubation was reported by 9.30%, while 83.30% of the participants faced difficulty. The majority (70.40%) of the participants agreed that AB prevented contamination with aerosol particles, whereas 13% disagreed about the efficacy. Use of AB made 68.50% of the participants mentally composed, while the rest were anxious. 7.40% of the participants felt that nothing can affect the composure of an anaesthesiologist. 55.60% of the respondents were more comfortable working

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Table 1: The questionnaire

1. Do you have any prior experience of use of aerosol box?
   - Yes
   - No
2. How did you come to know about aerosol box?
   - Social media
   - Colleague
   - Others
3. What is your overall experience about use of aerosol box?
   - Very helpful
   - Helpful but hurdle for intubation
   - Hazardous
4. Aerosol box made mask ventilation?
   - Easier
   - Difficult
   - Or did not affect procedure
5. Aerosol box made endotracheal intubation -
   - Easier
   - Difficult
   - Did not affect
6. Do you feel that use of aerosol box prevented contamination with aerosol particles?
   - Yes
   - No
7. Do you feel aerosol box made you mentally composed against the risk of aerosol exposure?
   - Yes
   - No
8. Do you feel you were more comfortable working with level 3 PPE without aerosol box?
   - Yes
   - No
9. Were you confident in use of aerosol box while extubating the patient?
   - Yes
   - No
10. Would you recommend using aerosol box to other colleagues for aerosol generating procedure?
    - Yes
    - No
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Conflicts of interest
There are no conflicts of interest.

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