

Comment on: Disposable customized aerosol containment chamber for oral cancer biopsy: A novel technique during COVID-19 pandemic

To the Editor,

Sharma et al¹ in their article suggested a disposable customized aerosol containment (DCAC) chamber for oral cancer biopsy using transparent plastic cube that rests over four-screen stands fixed around the operating table with ports on two sides and one hepa filter for air entry and one port for suction. The authors suggest DCAC chamber, which can be fabricated quickly with material readily available in any hospital with an inbuilt suction mechanism for the evacuation of aerosol produced while taking a biopsy or doing fiber optic bronchoscopy. There is one hepa filter for air entry and one port for suction. This makes it airtight to avoid aerosol escape.

As the economies are widely affected and medical supplies are lacking worldwide, we would like to suggest the additional usage of standard electrostatic filter. It is known to be widely used for ventilation machines with the effective protection against small viruses and the authors suggest correctly that it should also work against SARS-CoV-2.^{2,3} Furthermore, it is well known that the efficiency of the filters depends on the humidity meaning that if there is some degree of fluids in the abdomen (ascites, blood), the efficiency will decrease.⁴ The use of diathermy is a potential aerosol-generating procedure during the surgery.⁵⁻⁷

We would like to suggest the additional usage of standard electrostatic filter. It can be used to replace the N95 masks, FFP2, and FFP3. As all the governing bodies (SAGES, Royal College of Surgeons) recommend using full PPE during the surgical procedures and all the patients are treated as potential positive COVID-19 case.^{7,8} We take simple anaesthetic mask and connect it to the already mentioned filter (Figures 1 and 2). Some users state that it



FIGURE 1 All the standard operating room equipment needed to assemble the system including ventilation machine filter, mask, and Y connector



FIGURE 2 The mask constructed and used by the surgeon

might be quite hard to breathe using this system. So additional filter might be connected through simple Y connector (Figure 1). The filter can be used for up to 24 hours. FFP3 masks used in National Health Service are designed for 8 hours continuous use. All the parts are single used so it should be disposed according to hospital policy. All staff wearing FFP3 or our suggested device needs to be fit tested to ensure the masks have an adequate seal. It has been tested by surgeons and anaesthetist from Lithuania, Denmark, Germany, and Poland. All physicians reported simple, fast constructing and efficient usage of the system.

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Operating room staff including sisters and operation theatre attendants.

CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

DATA AVAILABILITY STATEMENT

There are no shared data used in the manuscript.

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