

# Heat and moisture exchanger filter as a substitute for T-piece device - A novel approach



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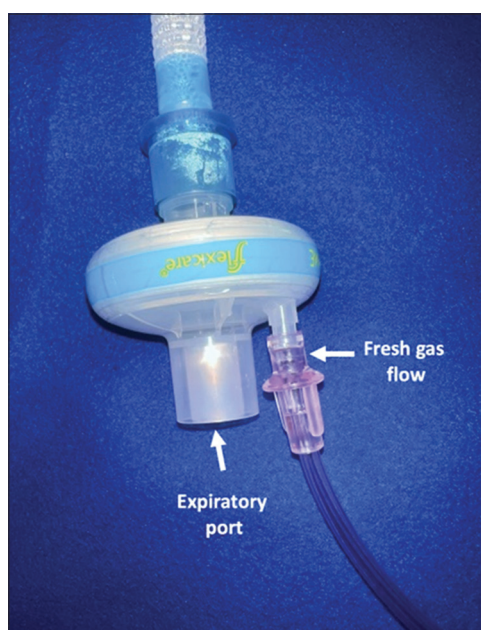
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Sir,

The T-piece trial is commonly used in the intensive care unit (ICU) to assess tracheal extubation readiness. A T-piece device has an expiratory port as well as a fresh gas flow supply. Heat and moisture exchanger filter (HMEF) is used in ventilator circuits to prevent bacterial/viral contamination and to provide humidity.<sup>1</sup> After being used on a single patient, they are frequently discarded.

We propose a novel method for using the HMEF filter in the ICU as a substitute for a T-piece device for short-term spontaneous breathing trials in the immediate postoperative period. The HMEF filter's side port can be linked to an oxygen flowmeter to provide fresh gas flow at 6–8 L/min, while the main port can be used for expiration (Figure 1). Shahid and Ahluwalia have used a 10 mL syringe to build a modified T-piece device for an emergency situation.<sup>2</sup> We have successfully used the HMEF filter in place of



**Figure 1:** Modification of heat and moisture exchanger filter with expiratory port and fresh gas supply for spontaneous breathing trial

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a T-piece device for short-term spontaneous breathing trials and tracheal extubation in the ICU in many of the postoperative patients. There are few advantages of this newer technique. It is cost-effective as there is no need to open a new T-piece device. Spontaneous breathing with HMEF provides humidification of inspired gas while also preventing aerosols from spreading from the patient to the medical staff. Examining the HMEF filter for secretions and blood clots is crucial which may cause resistance during the spontaneous breathing trial.

Hence, HMEF in place T-piece can be a simple and alternative technique for short-term spontaneous breathing trials in ICU for post-operative patients.

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**BV**- Conceptualization and writing original draft; **ABG**- Editing original draft.

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