

Are New Devices for Percutaneous Dilatational Tracheostomy Really Needed? Yes

To the Editor:

We read with interest the comments and suggestions of Dr Sangwan; however, a number of the issues he raised need to be clarified. A fiberoptic bronchoscope is commonly used during percutaneous dilatational tracheostomy (PDT) throughout Europe.¹ Recent surveys performed in Germany, Italy, and the United Kingdom report that a fiberoptic bronchoscope is used to guide PDT in ~90% of national ICUs.² The use of a bronchoscope is recommended and may add safety during PDT by recognizing anatomical landmarks, guiding procedural steps, and confirming the correct positioning of the cannula.^{3,4} The aim of a double lumen endotracheal tube (DLET) is to minimize impairment of ventilation and gas exchange during PDT.^{5,6}

Ultrasound neck evaluation is increasingly used as a screening tool before PDT to assess at-risk anatomical structure and to prevent puncture of vessels and bleeding.¹ However, although ultrasound-guided PDT has been recently proposed, current data do not suggest that ultrasound should replace bronchoscopy. If vascular injury should occur during the procedure, the presence of the distal cuff of the DLET protects the lung from blood aspiration and maintains stable ventilation.⁶ Contrary to the use of the DLET, the procedure suggested by Dr Sangwan to avoid puncture of the posterior tracheal wall requires an operator skilled in ultrasound.⁷

The use of a pediatric fiberoptic bronchoscope during PDT reduces the diameter of the endotracheal tube (ETT) and the delivered tidal volume.⁸ The DLET avoids any

reduction in the diameter of the ETT, allowing bronchoscopy completely independent from ventilation. The DLET may be used with a fiberoptic bronchoscope that is ≤ 5 mm in external diameter. Dr Sangwan proposes the use of an Easy Tracheostomy (EZT) with a proximal cuff serving as a locking mechanism.⁹ The EZT combines an extraglottic with the conventional subglottic ETT. The placement of the EZT may be difficult in patients with a narrow glottis. Furthermore, critically ill patients frequently have a narrowing of the airway due to prolonged or repeated intubations. We believe that the DLET is easier to use than the EZT, at least in select patients.⁶ Our recent papers are the first *in vitro*⁵ and *in vivo*⁶ studies of the use of the DLET during PDT.

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