

## Letters to the editor

### Capnography and oxygenation via single-use bougie

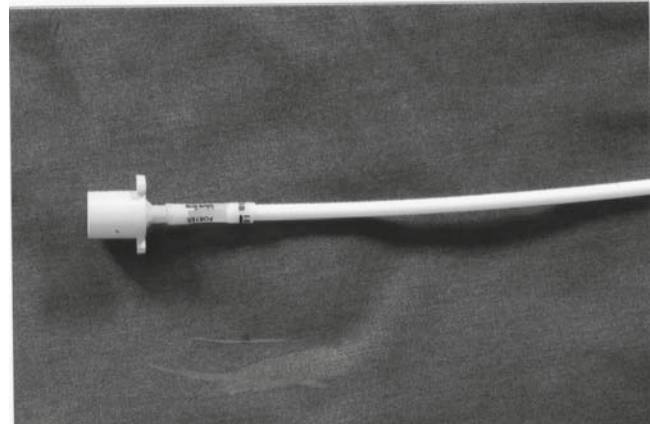
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*To the editor:* The multiple-use gum elastic bougie (Eschmann Health-Care tracheal tube introducer; SIMS Portex, Hythe, UK) is widely used as an aid during difficult intubation. However, concerns regarding the transferring of prions responsible for causing Creutzfeldt-Jacob disease when using multiple-use devices has led to a move in favor of single-use devices [1–3].

The single-use bougie became available in 1997 (Portex single-use tracheal tube introducer; Coude 15-French tip) [1]. This device has a central hollow lumen which was originally designed by Portex to improve the manufacturing process and to discourage re-use [1,2]. However, this central hollow lumen has been found to serve two important functions [2–5]. First, in capnography, and second, in apneic oxygenation. In spontaneously breathing patients, a 16-FR intravenous cannula is inserted into the lumen of the introducer at its proximal end [2–5]. The cannula is connected to the end-tidal carbon dioxide sampling line. By observing the end-tidal carbon dioxide waveform, one can ensure that the tip of the tracheal tube introducer is in the trachea. The tracheal tube can be slid over the introducer with continuous monitoring of capnography to ensure correct positioning of the tracheal tube. For apneic oxygenation, this cannula can be used to deliver oxygen at up to 4–8 l·min<sup>-1</sup> to the trachea.

We were initially using this 16 FR cannula for apneic oxygenation. However, we found its use to be cumbersome. The internal metallic stylet needs to be removed, which renders the cannula prone to kinking and bending [5]. Further, its use is feasible only with side-stream gas analyzers and not with the mainstream analyzers. To avoid these problems we use a different technique. A polyvinylchloride (PVC) 4.5-mm internal diameter (ID) tracheal tube is cut and its 2- to 3-cm proximal part is retained with the connector. This cut portion of the tracheal tube fits snugly over the proximal end of the single-use Portex tracheal tube guide (Fig. 1). One can easily attach any type of side-stream or mainstream sampling tubing to it and also provide the desired oxygen flow. This accessory piece of equipment can be easily removed (and if required easily reinserted) when the tracheal tube is railroaded over



**Fig. 1.** Size 4.5-mm internal diameter (ID) tracheal tube (length, 3 cm) fixed over the proximal end of the disposable bougie

the bougie. This is in sharp contrast to an intravenous cannula, which may be difficult and time-consuming to insert and remove repeatedly.

We have used this modified tracheal tube guide in more than 50 patients and found it to be an effective tool for capnography, using both side-stream and mainstream analyzers, and for delivering oxygen to the patient.

### References

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