

Use of the Coopdech Bronchial BlockerTM as a tracheal tube introducer in a patient with difficult laryngoscopy

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To the Editor:

Difficult airways in surgical patients who require one-lung ventilation have long been a challenge for anesthesiologists. Placement of devices for one-lung ventilation is more complicated and difficult than that of normal tracheal tubes [1]. We suggest a simple alternative method to facilitate placement of devices for one-lung ventilation in the case of difficult laryngoscopies. The Coopdech Bronchial Blocker (Daiken Medical, Osaka, Japan) has been clinically introduced to perform one-lung ventilations with a single lumen tracheal tube [2]. Its shape resembles that of the Eschmann tracheal tube introducer. The Parker Flex-Tip tube (Parker Medical, CO, USA), which has a flexible tip positioned towards the center of its distal lumen, has been reported to be easy to pass over a guide into the trachea [3]. We have successfully used a Coopdech Bronchial Blocker as an applicator for a Parker Flex-Tip tracheal tube for successful intubation and one-lung ventilation in patients not only with normal laryngoscopic views but also in cases when laryngoscopy proved difficult.

A 64-year old male was scheduled for left upper lobectomy of the lung. He had no limitation in head extension. His Mallampati score was class 2 and the thyro-mental distance was 6 cm. Anesthesia was induced with propofol and vecuronium was given to facilitate intubation. Mask ventilation was easy. The laryngoscopic view with a Macintosh blade was Cormack–Lehane grade 3. We ventilated the lungs again with 100% oxygen before the second intubation attempt. The Coopdech Bronchial Blocker was inserted through the Parker Flex-Tip tube beforehand (Fig. 1). We performed the laryngoscopy again, obtaining the best possible laryngeal view. However, despite applying external pressure only the epiglottis was visible. The Coopdech Bronchial Blocker was inserted and the marking point 10 cm from the tip reached the edge of the epiglottis. Then the Parker Flex-Tip tube was slid over the blocker and advanced into the trachea. The laryngoscope was withdrawn and the cuff was inflated. Correct positioning of the Parker Flex-Tip tube was verified by auscultation and fiberoptic examination. One-lung ventilation was performed successfully and a satisfactory operative field was achieved. Left upper lobectomy was completed without complication.

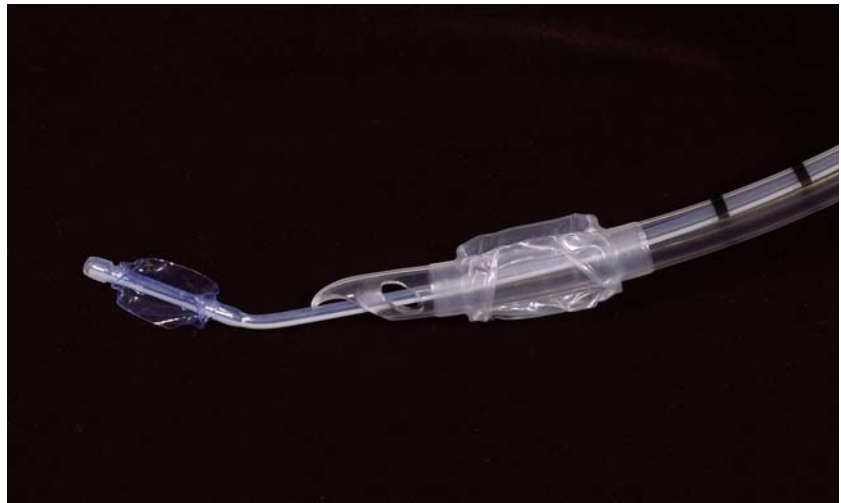
We suggest use of the Coopdech Bronchial Blocker with the Parker Flex-Tip tracheal tube as a simple alternative means of intubation and one-lung ventilation in a patient with difficult laryngoscopy. Although several newer devices have been developed to aid difficult intubation, they are not readily available in all operating theaters and as such direct laryngoscopy is still widely performed. The advantage of this method is that no other special devices are necessary. However, care must be taken not to injure the vocal cords, trachea, and bronchus, because the material of the Coopdech Bronchial Blocker is harder than that of the Eschmann tracheal tube introducer and the blocker is advanced blindly when the laryngoscopic view is poor.

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Fig. 1 A Coopdech Bronchial Blocker inserted through a Parker Flex-Tip tube



A similar method, the use of the Univent tube for difficult intubation, has been reported previously [4, 5]. In comparison, we believe our technique to be less traumatic than using the Univent tube. Although our Coopdech Bronchial Blocker technique could still cause trauma of the laryngeal structure, we feel that gentle insertion generally enables smoother and less traumatic intubation. This is because the Parker Flex-Tip's shape makes it easier to pass it into the laryngeal inlet than the Univent tube with its more rigid tip.

References

1. Hagihira S, Takashina M, Mori T, Yoshiya I. One-lung ventilation in patients with difficult airways. *J Cardiothorac Vasc Anesth*. 1998;12:186–8.
2. Ishizaki T, Yanagihara H, Isshiki A. One-lung ventilation using a new original connector: with a bronchial blocker and a single lumen tracheal tube (in Japanese with English abstract). *Masui (Jpn J Anesthesiol)*. 2003;52:191–4.
3. Kristensen MS. The Parker Flex-Tip tube versus a standard tube for fiberoptic orotracheal intubation: a randomized double-blind study. *Anesthesiology*. 2003;98(2):354–8.
4. Garcia-Aguado R, Mateo EM, Onrubia VJ, Bolinches R. Use of the Univent System tube for difficult intubation and for achieving one-lung anesthesia. *Acta Anaesthesiol Scand*. 1996;40:765–7.
5. Takenaka I, Aoyama K, Kadoya T. Use of the Univent bronchial-blocker tube for unanticipated difficult endotracheal intubation. *Anesthesiology*. 2000;93:590–1.