A Simple Adaptation to the Olympus LF1 and LF2 Flexible Fiberoptic Bronchoscopes for Instillation of Local Anesthetic

To the Editor:—In the management of the difficult airway, flexible fiberoptic bronchoscopy plays an important role. During fiberoptic intubation the airway can be effectively anesthetized by instilling local anesthetic through the patent channel of the fiberoptic bronchoscope instead of performing multiple nerve blocks. We use the Olympus LF1 and LF2 flexible fiberoptic bronchoscopes (FFB). The manual for the bronchoscope states that "... instillation of anesthetics can be performed through its 1.5 mm (internal diameter) channel."

We have found that the method for injecting local anesthetic described in the manual is impractical and awkward. Instillation of local anesthetic requires firm pressure on the fiberoptic injection port, which can lead to unintentional movement of the FFB and image loss. This can add to the procedure time and may be responsible for failure to adequately anesthetize the aryepiglottic region and the vocal cords. Additionally, the significant deadspace of the injection port and possible leakage of local anesthetic during injection make it difficult to estimate the total amount of injected local anesthetic.

To circumvent these problems, we have used the 4-inch filter straw from a PERIFIX Continuous Epidural Anesthesia Tray (Burrn CE-18TK) to instill local anesthetic solution through the FFB injection port (Fig. 1). The filter straw is first attached to a 10-ml syringe filled with local anesthetic and then inserted as deeply as possible through the injection port.

The filter straw bypasses the deadspace of the valve and firmly holds the syringe to the FFB during the procedure. Instillation of local anesthetic through this adaptation allows for exact dosing of local anesthetic and minimal interference with the FFB image and is less awkward, particularly when a single anesthesiologist performs the awake fiberoptic intubation.

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