

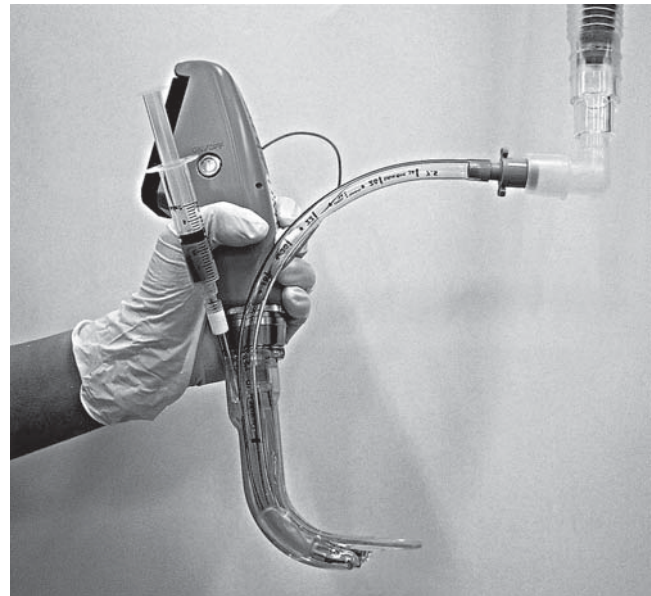
## Awake intubation using the Airway Scope

Yoshihiro Hirabayashi and Norimasa Seo

Department of Anesthesiology and Critical Care Medicine,  
Jichi Medical University, 3311-1 Yakushiji, Shimotsuke, Tochigi  
329-0498, Japan

*To the editor:* The Airway Scope (Pentax, Tokyo, Japan) is a rigid videolaryngoscope for tracheal intubation that permits a non-line-of sight view of the airway [1–2]. The blade of the Airway Scope has two side channels parallel to the fiberoptic system. The main channel acts as the conduit for the placement and insertion of a tracheal tube, while the sub-channel, accepting a thin catheter, is the route used for suction. The latter channel can function as a route for topical anesthesia of the larynx. The purpose of this letter is to describe the use of the Airway Scope in nine cases of awake intubation. In the first to fourth cases, middle-aged patients were chosen to have awake intubation because of suspicion of difficult intubation, including massive tumor and abscess in the neck, a large tracheal tumor, and deformity after maxillofacial surgery. In the fifth and sixth cases, awake intubation was chosen because these middle-aged patients had a history of difficult intubation with the conventional Macintosh laryngoscope. In the seventh and eighth cases, awake intubation was indicated because of a full-stomach condition. Both of these middle-aged men were vomiting. In the ninth case, a 92-year-old woman showed cardiovascular shock due to thrombus of the superior mesenteric artery. During laryngoscopy, sedation was provided by fentanyl in seven patients; fentanyl and midazolam in one; and no sedative in the ninth.

Local Ethics Committee approval and patient consent were obtained. A tracheal tube was prepared in the main channel of the blade, and a 10-French catheter with syringe, containing lidocaine, was set in the sub-channel (Fig. 1). The circuit from the anesthesia machine, delivering oxygen at  $6\text{ l}\cdot\text{m}^{-1}$ , was connected to the tracheal tube, and consequently, the patients were given oxygen during laryngoscopy. Following a gargle with 4% lidocaine, the pharynx was anesthetized with atomized 4% lidocaine, using a mucosal atomization device (Wolfe Tory Medical, Salt Lake City, UT, USA). Superior laryngeal nerve and transtracheal blocks were not employed. The catheter was advanced once a good view of the glottis was obtained and the target signal on the monitor screen was aligned with the glottic opening and additional lidocaine was delivered to the vocal cords and trachea. After removal of the catheter, while the Airway Scope was held in place, the tracheal tube was placed into the trachea. The time from the initiation of the gargle with lidocaine to the correct placement of the tracheal tube was less than 4 min in all patients. All the



**Fig. 1.** The Airway Scope (Pentax) is equipped with a tracheal tube in the main channel, and a 10-French catheter with a syringe is set in the sub-channel. The tracheal tube is connected with the circuit of the anesthesia machine. In this photograph, the topical anesthetic is intentionally stained with ink for identification

tracheal tubes were inserted smoothly at the first attempt, without complications.

Based on our experience, the Airway Scope seems suitable for awake intubation. The non-line-of sight view of the glottis is expected to minimize the extension of the neck and need for excessive force, causing less stress to the patient, compared with direct laryngoscopy with the Macintosh blade. The Airway Scope is significantly robust compared with the fiberoptic bronchoscope; hence, the easy maneuverability and less susceptibility to damage. Further clinical studies are warranted to confirm these positive findings.

*Acknowledgment.* The 10-French catheter with an end-hole for spraying topical anesthetic was supplied as a sample from Hakko Medical (Tokyo, Japan).

## References

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*Address correspondence to:* Y. Hirabayashi

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