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LETTER TO THE EDITOR

Successful use of a videolaryngoscope in a patient with carcinoma of the oropharynx and obstructed airway

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Dear Editor,

Clear evidence indicates that videolaryngoscopy offers improved viewing of the glottic entrance as compared to direct laryngoscopy in normal airways. Nonetheless, the procedure does not guarantee easy intubation. The unexpectedly obstructed airway is the single most important cause of anesthesia-related morbidity and mortality worldwide.[1, 2]

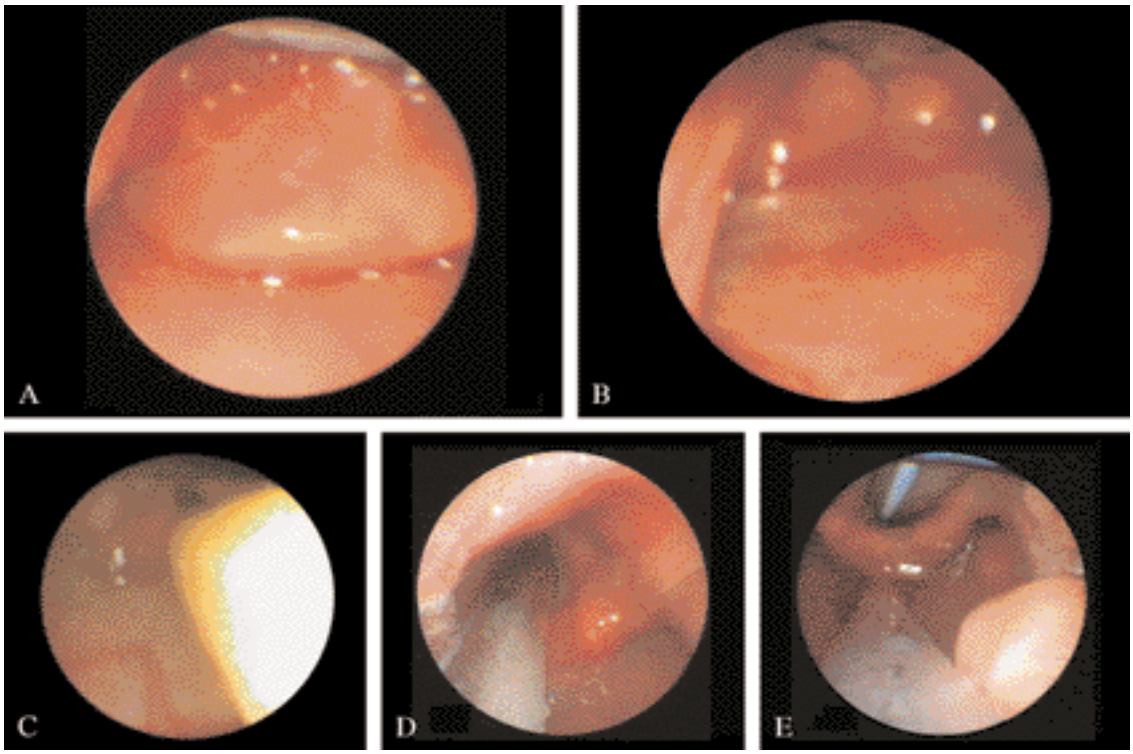

Figure 1—Pharyngeal views, recorded with a videolaryngoscope, of a patient with oropharynx carcinoma showing A) Cormack-Lehane grade III; B) parts of the arytenoids; C) gum elastic bougie; D) endotracheal tube in situ together with E) nasogastric tube.

The videolaryngoscope (DCI™ Video Intubation System, Karl Storz, Tuttingen, Germany) is a relatively new and useful airway management device for use in airways that are anticipated to be obstructed.[3] It is designed – just as with any Macintosh blade – to be inserted on the right side of the tongue, which is compressed and deflected laterally, and then it is gradually advanced towards laryngeal and pharyngeal structures, thus aiding endotracheal intubation by direct visualization. The videolaryngoscope has a incorporated digital camera into the blade, which displays a view of the vocal cords on the monitor, and allows endotracheal tube placement to be visualized easily.[3-5]

Herein, we report the first successful use of a videolaryngoscope in a patient with large exophytic carcinoma of the oropharynx and an obstructed airway.

A 77-year-old (ASA III, height 170 cm, weight 69 kg) male patient was scheduled for cystectomy and Bricker operation under general anesthesia. His past medical history was significant for carcinoma of the oropharynx (T4N0M0), with an exophytic tumor growth in the oropharynx and at the base of the tongue (status: postradiation therapy six months ago). His preoperative airway evaluation revealed limited mouth opening (2.3 cm) and thyromental distance (6.1 cm), and Mallampati score of IV, but normal neck movements.

In anticipation of a "difficult airway," the difficult airway trolley was secured prior to induction of anesthesia. After placement of routine monitors, the patient was preoxygenated for four minutes with 100% oxygen, and anesthesia was induced with intravenous 200 mg propofol and 50 µg fentanyl. Once manual positive pressure ventilation proved to be adequate (oxygen saturation 99%), 100 mg suxamethonium was injected intravenously to obtain muscle paralysis. Controlled positive pressure ventilation was conducted (using a mixture of oxygen, air and sevoflurane) for approximately two minutes, until the patient was considered "adequately relaxed" for endotracheal intubation. The first attempt at endotracheal intubation with direct laryngoscopy (Macintosh blade) was unsuccessful; a Cormack-Lehane grade IV was obtained (no epiglottis could be seen). Two more attempts at direct laryngoscopy, with the classic Macintosh and the McCoy laryngoscope, failed to visualize any part of the glottic entrance and/or the epiglottis. The videolaryngoscope was inserted and a Cormack-Lehane grade III (Figure 1A) was obtained. With some external pressure on the cirico-thyroid area, parts of the arytenoids became visible (Figure 1B). However, an endotracheal tube (ETT) with a stylet in place failed to enter the glottis. It was feasible to insert a gum elastic bougie (Figure 1C), and the ETT could be railroaded easily over the gum elastic bougie into the trachea (Figure 1D). A nasogastric tube was then inserted – under direct guidance – into the esophagus (Figure 1E). To the best of our knowledge, this is the first reported successful use of the videolaryngoscope for the management of a patient with (exophytic) oropharyngeal cancer and difficult airway.

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