

Videolaryngoscopy offers advantages over classic laryngoscopy in a patient with seriously limited lip opening

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To the Editor:

Inability to intubate the trachea is a leading cause of anesthesia-related injury [1]. Videolaryngoscopy offers advantages over direct laryngoscopy and is less traumatic [2, 3], as the miniature videocamera on the tip of the blade enables the intubator to provide an indirect view of the upper airway. We report a patient with limited lip opening in whom videolaryngoscopy proved to be helpful to provide a patent airway.

A 73-year-old woman (160 cm; 75 kg; American Society of Anesthesiologists [ASA] physical status II), scheduled for lip reconstruction following lower lip cancer, underwent extensive lower lip resection with upper lip rotation (Abbe-Estlander flap) to fill the lower lip defect [4]. Both lips were sewn together for 6 weeks, leaving an oral opening of 2.6 cm (intercommissural width). At the time of lip reconstruction (dividing the pedicle and releasing the lips), the patient showed asymmetric and limited mouth opening (interincisor distance 1.2 cm, oral width 2.6 cm; thyromental distance 6.8 cm; Mallampati grade IV), normal neck movement, and an adequate oral space. Precautions were taken to deal with a difficult airway: i.e., the provision of a difficult airway trolley, and personnel skilled in performing a surgical airway.

After preoxygenation, anesthesia was induced with i.v. propofol 200 mg. Face mask ventilation was successful with capnographic tracing, and 100 mg succinylcholine was administered. The narrow mouth orifice prohibited any direct vision of the oral cavity during direct classic laryngoscopy (Cormack–Lehane grade IV), resulting in excessive tension on both lips. Channeled indirect videolaryngoscopes (Pentax-AWS[®], Tokyo, Japan; Airtraq[®], Prodol-Meditec, Vizcaya, Spain) were considered, but they were found to be too bulky to fit into the patient's mouth, and failed to work, indicating that the wider blades of channeled videolaryngoscopes are a weak point. The insertion of a V-MACTM videolaryngoscope (Karl Storz[®], Tuttingen, Germany), which consists of a less wide Macintosh-blade size three, into the mouth (Fig. 1) showed a Cormack–Lehane grade I on the monitor, and oral endotracheal intubation was successful at the first attempt, without the need to use a stylet.

Normally a Macintosh-blade laryngoscope is introduced into the right side of the mouth, deflecting the tongue to the left, and the length of the blade is passed over the contour of the tongue. Subsequently the tongue is lifted upwards and forwards, so that enough room is created next to the blade to both visualize the glottic entrance and to insert the endotracheal tube in situ. In this patient no such maneuvers were an option. This case highlights the advantage of indirect videolaryngoscopy (Macintosh intubation blades incorporating optics in the tip for video-imaging) in patients with very limited mouth openings. The intubator does not need to see the vocal cords directly, as videolaryngoscopy offers both better laryngoscopic views and more successful intubations than classic laryngoscopy [2, 3, 5].

Management of difficult laryngoscopy in the patient with seriously reduced opening of the lips offers a unique and ongoing challenge for the anesthetist. With the present

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Fig. 1 Videolaryngoscope in situ in a patient with very limited lip opening

patient, the small size and the shape of the V-MAC™ videolaryngoscope blade, which fitted better than the blades of channeled videolaryngoscopes, offered a valid alternative to fiberoptic and classic laryngoscopy, because the bulkier blades of the channeled videolaryngoscopes (Pentax and Airtraq) failed to work for this patient.

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