

Use of gum elastic bougie through the intubating laryngeal mask airway: an unconventional way of securing the airway in an emergency

The intubating laryngeal mask airway (LMA) has been advocated for use in expected difficult airways and adds the benefit of ventilation during intubation attempts with minimum neck movement during insertion.¹ The Fastrach™ silicone wire-reinforced tube, a reusable and relatively expensive tube, has been designed to be used with the intubating LMA. Polyvinyl chloride (PVC) tubes and armoured tubes have been used with intubating LMAs.^{2,3} Concerns have been raised about the safety of this practice. A case of death due to airway trauma from the Fastrach™ silicone wire-reinforced tube has been reported.⁴ We present the case of a patient with ossified posterior longitudinal ligament, who we attempted to intubate with an intubating LMA, but an unexpected malfunction of the Fastrach™ silicone wire-reinforced tube forced us to resort to unconventional methods.

A 68-year-old male patient with C3-C4 and C5-C6 ossified posterior longitudinal ligament, with compressive myelopathy, was booked for posterior laminoplasty with decompression. The airway concerns for this patient were the limited mobility of the atlanto-axial joint, and the need to prevent extension of the neck for fear of cord compression. We planned to use an intubating LMA with the Fastrach™ silicone wire-reinforced tube for the surgery.

On the day of surgery, after inducing the patient, a number 4 intubating LMA was inserted. A fibre-optic bronchoscope was used to guide the Fastrach™ silicone wire-reinforced tube through the intubating LMA into the larynx. During inflation of the cuff of the Fastrach™ silicone wire-reinforced tube, we noticed that the pilot balloon remained collapsed and that there was air leak around the cuff, indicating damage to it. A PVC tube was not an option, since the surgery was to be prolonged and in the prone position.

The next option was an armoured tube. However, the connector of the armoured tracheal tube available to us, couldn't be disconnected without damaging it, hence preventing its use through the intubating LMA. Therefore, we modified our plan and passed a gum elastic bougie through the lumen of the Fastrach™ silicone wire-reinforced tube into the trachea. Once it was in place, the flexometallic tube was removed, keeping the bougie in situ. The intubating LMA was then very carefully removed over the bougie. An 8.5-mm internal-diameter armoured tube was railroaded

over the bougie. The cuff was then inflated, the bougie removed, and the patient was connected to the ventilator. Throughout this period, the patient was closely observed for haemodynamic disturbances or episodes of desaturation, which fortunately did not occur.

PVC tubes and armoured tubes exert significantly greater force through the intubating LMA on exiting than the Fastrach™ silicone wire-reinforced tube does. The Fastrach™ silicone wire-reinforced tube has the added benefit of collapsing on impact. This results in significantly lesser trauma to the airway structures and oesophagus.⁵ However, unexpected complications during management of the difficult airway can occur in the form of equipment malfunction, or unavailability of necessary equipment at critical junctures. Securing the airway is of prime importance in these circumstances. With the innovative use of the bougie through the intubating LMA, we were able to devise an effective and comparatively safer technique with which to intubate the patient in an emergency situation.

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