

increase, 0.24 kPa). There was no significant increase in EtCO<sub>2</sub> with increased BMI ( $P>0.05$ ).

Our extensive dataset demonstrates that HFJV is safe and effective in elective laryngotracheal surgery. As expected, significant desaturation increases with increased operative length and increased BMI. Hypercapnoea was not an issue, and perhaps unexpectedly was not affected by BMI. Care should be exercised ventilating a male patient BMI >35 where there is an increased probability of desaturation.

## References

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## Blind tracheal intubation through intubating laryngeal tube iLTS-D® and Fastrach®: a multicentric randomised study

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The intubating laryngeal tube suction–disposable (iLTS-D®) (VBM Medical Inc., Sulz, Germany) is a new laryngeal tube with gastric access and is specifically designed to allow tracheal intubation through the device. Effective ventilation through a laryngeal tube has already been demonstrated and could be achieved quicker than ventilation with other type of supra-glottic devices. The Fastrach® (Teleflex, Buckinghamshire, UK) is an established laryngeal mask and is still recognised as the Gold Standard for blind intubation in case of difficult airways. Many studies concerning other intubating laryngeal masks showed the superiority of Fastrach. Two clinical studies concerning the iLTS-D already demonstrated successful fiberoptic intubation through the device on manikins and real patients. The aim of this prospective multicentric randomised study was to establish if iLTS-D was as effective for blind intubation as Fastrach with the advantage of a gastric access and quicker ventilation achievement.

Ninety-nine patients requiring general anaesthesia with orotracheal intubation were randomised to one of the two study groups: iLTS-D or Fastrach. After anaesthesia induction, the assigned device was inserted, and success rate and time for successful ventilation were measured. The main investigator then proceeded to a blind intubation through the device under fiberoptic control by a second anaesthetist. Success rate after one and two attempts and time for intubation were recorded. Ethical approval was granted (Commission cantonale d'éthique, Lausanne, Switzerland), and data were collected in two primary centres and one secondary centre.

Fifty and forty-nine patients were respectively recruited in each study group. The success rate for tracheal intubation after one attempt was 43% with iLTS-D and 82% with Fastrach

( $P=0.001$ ). The overall successful tracheal intubation was also significantly lower with iLTS-D (70% vs 92%,  $P=0.006$ ). Times for intubation were similar in the two groups (44 vs 50 s,  $P=0.59$ ). Successful ventilation was achieved in 94% of patients in the iLTS-D group and 100% in the Fastrach group ( $P=0.829$ ). Time for ventilation was also similar in the two groups (31 vs 36 s,  $P=0.15$ ). The success rate for the placement of a gastric tube with iLTS-D when intubation was successful was 100%. No major complication was recorded in both groups.

Our study provides the first data concerning blind intubation through a laryngeal tube. The iLTS-D had an overall successful tracheal intubation rate significantly lower than the Fastrach. Ventilation success rate and time were identical. Even if the iLTS-D bears the advantage of a gastric access and effective ventilation, it should require modifications to become suitable for blind intubation.

## A model for ultrasound-assisted cricothyroidotomy: making a mark before taking the plunge

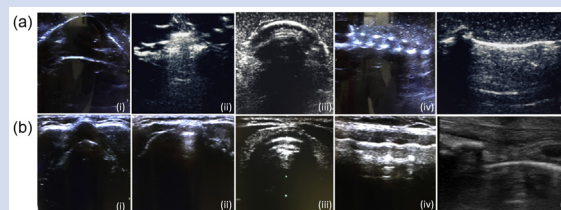
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The 4th National Audit Project (NAP4) showed that there was ~60% failure rate of emergency cannula cricothyroidotomy, and suggested that anaesthetists should be trained to perform a surgical airway.<sup>1</sup> The ability to identify the cricothyroid membrane, especially in patients with difficult anatomy (e.g. obesity, burns), is an important contributor to this high failure rate. It has been recommended that ultrasound identification of the cricothyroid membrane should be used in those whom inspection and palpation are not adequate.<sup>2</sup>

We have developed a cost-effective, high-fidelity airway model of adjustable difficulty for cricothyroidotomy practice.<sup>3</sup> It has the added benefit of being useful for ultrasonography (Fig. 8).

The model components consist of: a larynx made of silicone bathroom sealant, and anaesthetic breathing circuit tubing, which acts as a trachea and a reservoir bag as the lungs. Layers of ADAMgel (Aqueous Dietary Fibre Antifreeze



**Fig 8** Collage of sonographs showing anatomical structures in the airway model (a) and a live subject (b). Axial view of the thyroid cartilage, cricothyroid membrane and cricoid cartilage are shown in columns (i), (ii), and (iii), respectively. Sagittal views of the trachea and cricothyroid membrane are shown in columns (iv) and (v), respectively.