on either a manikin or a patient. The mean time to perform NCTO and oxygenation was 2 min 15 seconds which improved to 1 min 12 seconds on the second attempt after the guidance demonstration. 100% of candidates were more confident, with 16% improving by 4 points on the Likert scale.

### Average time in seconds to perform procedure before and after training

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Before Training</th>
<th>After Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cricothyroid puncture</td>
<td>120</td>
<td>63</td>
</tr>
<tr>
<td>Check placement</td>
<td>127</td>
<td>81</td>
</tr>
<tr>
<td>Oxygenation</td>
<td>240</td>
<td>78</td>
</tr>
</tbody>
</table>

#### Conclusion(s)

If NCTO is to remain on the CICV guidelines then it should be a core skill which every anaesthetist should be familiar with. 100% of candidates felt it should be part of formal training. This study shows improvement with time taken to perform the procedure and the confidence in those taking part. Those candidates would now feel more able to deal with a “can’t intubate can’t ventilate” scenario.

### Learning points

- Sugammadex showed to be useful as an emergency drug in a CICV scenario, as it permitted complete recovery of neuromuscular blockade in less than 1.30 minutes.
- Despite advances in airway management retrograde intubation remains useful for securing the airway in head and neck cancer (HNC) pts (incl. naso-tracheal). We present 29 retrograde intubations (11/29 naso-tracheal) performed at one institution between 2004-2011 in HNC pts in whom the use of the intubating bronchofiberscope was difficult excess of saliva/blood/mucus/necrotic masses obliterating vision and unremovable with BFS suction.
- Sugammadex dose has already been demonstrated as the immediate recovery of neuromuscular blockade after Rocuronium intubation. It is still the main cause of morbidity and mortality (1:176000 deaths/year) anaesthesia-related.

### References


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### 19AP3-8

‘Can’t intubate, can’t ventilate’: the use of sugammadex as a rescue technique - a case report

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#### Background

The scenario ‘Can’t intubate, can’t ventilate’ (CICV), with an estimated incidence of 0.01-2:10000 non-urgent cases(1), requires immediate intervention. It is still the main cause of morbidity and mortality (1:176000 deaths/year) anaesthesia-related. The efficiency of Sugammadex 16mg/Kg in the immediate recovery of neuromuscular blockade after Rocuronium intubation doses has already been demonstrated (2). As there are few reported cases, we present one where its use, as a rescue technique, solved a life-threatening situation without associated morbidity.

#### Case report

Forty-year old female patient, ASA III; obese; mental retardation due to birth, presented for septoplasty and turbinectomy. Airway examination: Mallampatti view and mouth opening examination were not made as the patient did not cooperate. Thyroid cartilage-mouth floor distance > 6cm, cervical extension > 90°.

Preoxygenation, induction with Remifentanil perfusion and Propofol; Videolar-yscopy with Glidescope® showed a Cormack and Lehane grade II; Easy facial mask ventilation, capnography trace obtained. Administration of Rocuronium. Repetition of videolar-yscopy showed a grade II. After repositioning the patient, we tried intubation using Macintosh and McCoy blades, stylet and gum elastic bougie - all turned to be unsuccessful. We retrieved bag and mask ventilation, but even with a two-person technique, it failed to improve the now impending CICV situation. When the patient begins to desaturate, 5 minutes after the relaxant administration, we used Sugammadex 16mg/Kg. After 57 seconds, bag and mask ventilation was already possible. TOF > 90% after 1min 15sec.

Gradual recuperation of the SpO2 tendencies electronically registered. As it was an elective procedure, we decided to wake the patient up and postpone it. We asked the family consent for presenting this case report.

#### Discussion

The difficult ventilation with bag and facial mask and laryngoscopy only after administration of the muscular relaxant may be explained by flaccidity of airway structures associated with some thoracic rigidity opioid-induced. This ending was only possible because of the use of Sugammadex, as it permitted gaining time, in association with the anesthetic-surgical team work.

#### References


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### 19AP3-9

Left-molar approach of tracheal intubation saves eighteen degrees extension of the atlanto-occipital joint

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**Introduction:** The left-molar approach of laryngoscopy (LtMA) improves glottic view in sporadic cases of difficult laryngoscopy (1)(2). We examined the distance reduction and the change in the angle of head extension between conventional midline approach (MA) and LtMA.

**Methods:** After institutional approval and informed consent, 40 patients (20 female and 20 male) (ASA PS: I-II) scheduled for elective surgery were studied. Intravenous anaesthesia was induced and maintained.

A Macintosh standard curved blade was used and the flange of the blade was graduated in centimeters from the tip to measure the distance from the patient’s teeth to the glottis. On the tracheal intubation, a solid figure is assumed in the patient’s oral cavity, and apaxes were named with symbols. Point A: upper incisor, B: left molar, the flange of the blade touched with LtMA. C: right molar, symmetrical opposite side point of B, P: the vallecula where the tip of the blade was placed, Q: midpoint of segment BC. In the tetrahedron ABPQ, AP is a direct line of view to the glottis with MA and BP is as that with LtMA. Angle APQ is to save the extension of the atlanto-occipital joint. < Actual measurement > First, the blade was inserted with MA, the distance of AP was measured. Second, the blade was reinserted from the left corner of the mouth as LtMA and the length of BP was recorded.

After tracheal intubation, we measured the distance of BQ and AQ. In the tetrahedron ABPQ, segment PQ was calculated by Pythagorean theorem. And the laryngoscopist’s line of sight to the glottis falls to horizontal line with 18 degrees on average.

**Conclusion:** LtMA may relieve the strong extension of the atlanto-occipital joint. Intravenous anaesthesia was induced and maintained.

**Learning points:** Sugammadex showed to be useful as an emergency drug in a CICV scenario, as it permitted complete recovery of neuromuscular blockade in less than 1.30 minutes.

#### References

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### 19AP3-3

Retrograde intubation revisited - naso-tracheal retrograde made easy with the epidural catheter

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**Introduction/Aim:** Despite advances in airway management retrograde intubation remains useful for securing the airway in head and neck cancer (HNC) pts (incl. naso-tracheal). We present 29 retrograde intubations (11/29 naso-tracheal) performed at one institution between 2004-2011 in HNC pts in whom the use of the intubating bronchofiberscope was difficult excess of saliva/blood/mucus/necrotic masses obliterating vision and unremovable with BFS suction.

**Material and Method:** 29 pts (17M, 12 W); mean age: 57 yrs (range: 39-73) qualified for HNC surgery with difficult airway (postop. anatomy, prior radiotherapy, trismus /intubation via missing molar gap/ or combination of these). With the pt in half-sitting position, after i.v. premedication with midazolam 1 mg, fentanyl 50 µg, local anaesthesia was induced by injecting 2 ml of xylocaine above the cricothyroid membrane, the larynx was located by air aspiration and another 2 ml of 2% xylocaine injected into it. The cricothyroid membrane was pierced by a Tuohy needle (anti-coring curve directed rostrally) and an epidural catheter (EC) was introduced via the larynx into the mouth. The pts were asked to assist the doctor by helping to retrieve the EC with their hand or, in trismus patients, with the tongue via a gap (e.g. missing molar). In case of naso-tracheal intubation another EC was introduced through the nose, retrieved through the mouth and the two were tied together.

The endotracheal tube was passed along the tautly held catheter the catheter was removed and the position of the tube assessed (ET CO2).