

Awake Fibreoptic Intubation Course



Date: Last Wednesday in September / November / February / April

Time: 08.30 – 13.30
Meet in Anaesthetic Department Coffee Room
3rd Floor Maple Link Corridor (opposite Main Theatres)

Venue: 3rd Floor Podium
University College Hospital, 235 Euston Road, London, NW1 2BU

Kindly supported by Storz

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KARL STORZ – ENDOSKOPE

Course Organisers

Dr Simon Clarke
Consultant Anaesthetist UCLH

Dr Kirstie McPherson
Consultant Anaesthetist UCLH

UCLH Airway Fellows

Programme

We advise that you must not be on-call the night following the course

Please remain NBM for solids from 6am and drink water up until 8am. Bring this signed consent form with you to the course or return it to us by email.

Timetable	
08.30 – 09.00	Introduction and aims
	Dr Ian Calder NHNN Video
	UCLH AFOI Video
09.00 – 11.00	Handling the scope
	Topical Anaesthesia Method
	Mannequin workshop / ORSIM
11.00 – 11.30	Practice candidate no.1
11.30 – 12.00	Practice candidate no.2
12.00 – 12.30	Practice candidate no.3
12.30 – 13.00	Practice candidate no.4
13.00 – 13.30	Q & A, Session Close

Airway Endoscopy Under Local Anaesthetic (LA)

Before volunteering for an awake fibreoptic endoscopy you will need to understand what is involved, the risks of the procedure and exactly how you can expect to feel during and afterwards.

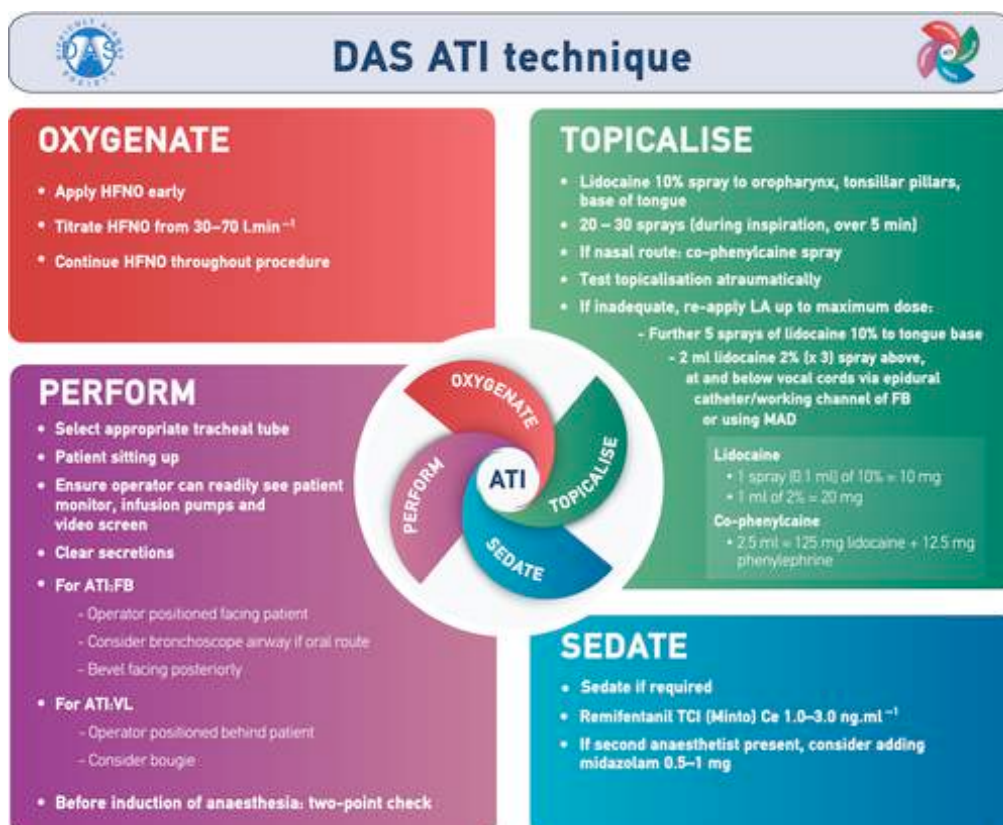
We have based our LA technique on the latest DAS awake tracheal intubation (ATI) guidelines, which were recently updated in 2020. If you would like to familiarise yourself with these guidelines please click [here](#).

Method

Each delegate will have fasted for at least four hours prior to undergoing endoscopy. To this end, please ensure that you have had a light breakfast and

are well hydrated prior to 6am on the morning of the course. You do not necessarily have to be starved from midnight the previous night.

- The procedures take place in an operating theatre or anaesthetic room, with monitoring & resuscitation facilities available
- Set up the environment considering work space ergonomics
- Calculate the Maximum permitted dose of LA for your weight (~9mg/kg)
- Drugs are to be prepared by each candidate, for use on your own airway
- Routine monitoring is applied (ECG, NIBP & pulse oximetry)
- Complete the ATI checklist
- The mouth and oropharynx will then be topicalised with 10% lidocaine spray (Xylocaine; 10mg per spray)
- 20 sprays should be performed during inspiration, over 3-5 mins (200mg)
- Topicalisation can then be tested – e.g. with suction catheter via the mouth
- If inadequate, re-apply 10% lidocaine to the tongue base, 5 sprays at a time, up to the Maximum dose for the weight of the candidate
- Have some allowance left for application of lidocaine to the vocal cords (VC) 2ml of 4% = 80mg per VC spray. Usually, 2-3 sprays required.
- Topical Co-phenylcaine spray is then applied to nostril(s) (total 2.5ml, 125mg)
- When satisfactory anaesthesia has been achieved, course members will perform airway endoscopy under direct supervision
- Once visualised, topicalisation at and below the vocal cords will be performed by application of 4% lidocaine (2ml 4% in a 3 or 5 ml syringe with air) via the working channel of the fiberoptic scope or via an epidural catheter
- Each delegate will perform airway topical anaesthesia on one candidate and the endoscopy procedure on 2 of the delegates in turn, sitting & lying
- Local anaesthetic injections, cocaine or sedation will NOT be used



Risks

- Trauma to the airway including bleeding or perforation and subsequent abscess formation
- Allergic reactions to lidocaine, glycopyrrolate, co-phenylcaine, preservatives in local anaesthetic solution, latex etc.
- Hypertensive response with co-phenylcaine
- Drug toxicity due to lidocaine
- Aspiration of gastric contents
- Infection: localised or systemic

With the exception of minor nasopharyngeal trauma, none of these complications are seen commonly. Doses of lidocaine applied to the airway are large (up to 9mg/kg). These have been found to be acceptable in-patients undergoing bronchoscopy¹.

How Does it Feel?

There is obviously a degree of apprehension associated with anticipation of an awake intubation.

Topical application of local anaesthetic spray to the airway tastes unpleasant. Lidocaine has a bitter taste and the Xylocaine preparation tastes like 'bananas'! The application of a vasoconstrictor to the nose can be a little uncomfortable. Topicalisation usually produces coughing &/or gagging, as may early advancement of the scope, before adequate anaesthesia.

When the larynx has a limited response to further increments of local anaesthetic the fiberoptic scope can be passed through the cords. In general the procedure is well tolerated. The position of the scope is confirmed & then removed.

You may feel a certain degree of 'elation' when the procedure is over. This sensation is enhanced by the effects of lidocaine, which produces some mild dysphoria sometimes. Following the procedure, the subject may be aware of some nasal stuffiness.

Participating candidates must not drive for 4 hours after endoscopy. We also advise that you must not be on call immediately following the course.

Calculating Maximum Local Anaesthetic Doses

Maximum topical dose of lidocaine = 9mg/kg
Average 60kg woman = 540mg
Average 70kg man = 630mg

Co-phenylcaine contains 5% i.e.
50mg/ml lidocaine
2.5ml = **125mg** lidocaine

10% Xylocaine spray = **10mg** per
spray. 20 sprays = **200mg** lidocaine

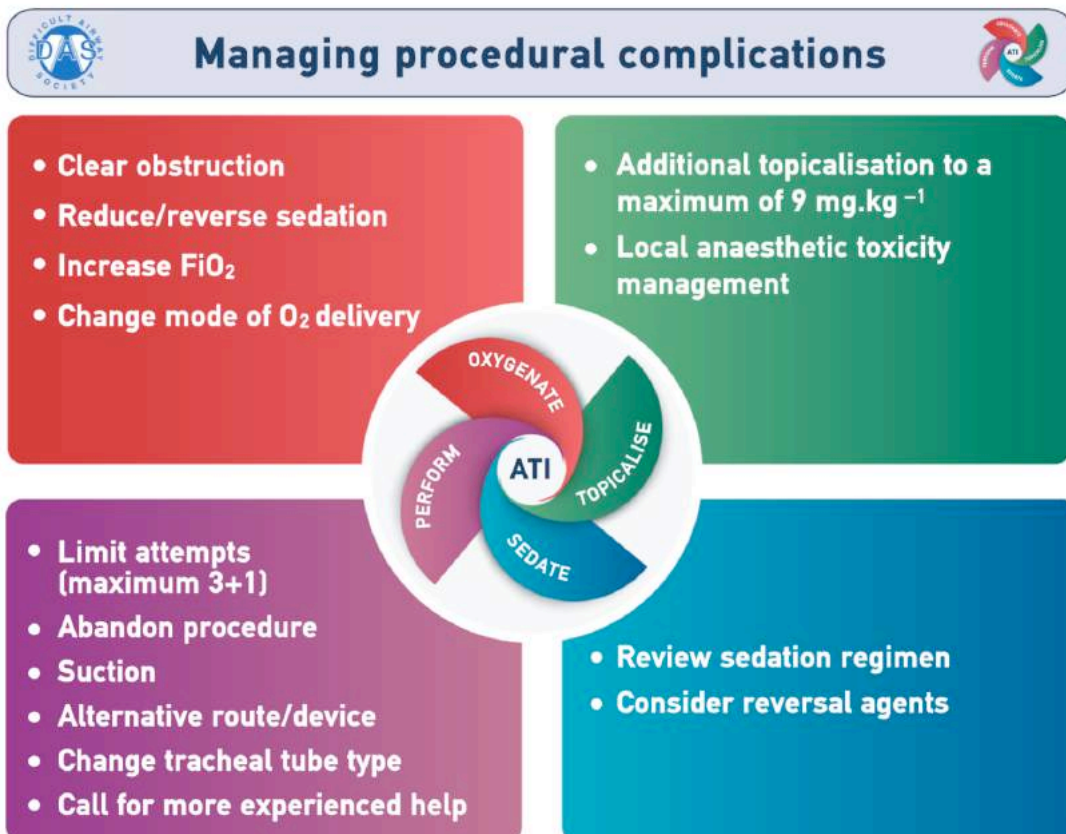
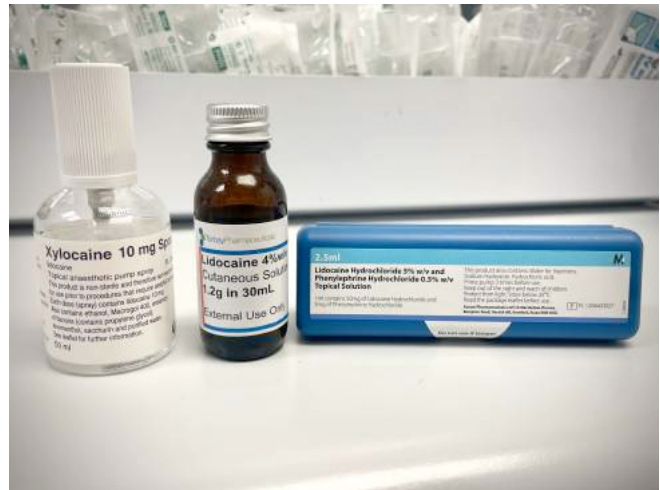
4% lidocaine contains 40mg/ml
Each 2ml syringe = **80mg** lidocaine

Example regimen:

20 sprays of Xylocaine + 2.5ml nasal
co-phenylcaine + 2 x 2ml of 4%
lidocaine

= 200 + 125 + 160

= **485mg** lidocaine (acceptable for a **54 kg** patient)



References

- 1) Efthimiou J, Higenbottam T, Holt D, Cochrane GM. Plasma concentrations of lidocaine during fiberoptic bronchoscopy. *Thorax* 1982; 37: 68-71). Awake fiberoptic intubation has been reported to be safe in patients at high risk of aspiration (Ovassapian A, Krejcie TC, Yelich SJ, Dykes MHM. Awake fiberoptic intubation in patients at high risk of aspiration. *Br J Anaesth* 1989; 62: 13-16

Feedback Form

Your feedback (both positive and negative!) provides us with useful information that helps us to continually change and improve this course. Please complete the following feedback form by scanning the QR code below:



Once you've completed the feedback form, we'll send you a certificate of attendance and receipt