

# DIFFICULT AIRWAY SOCIETY

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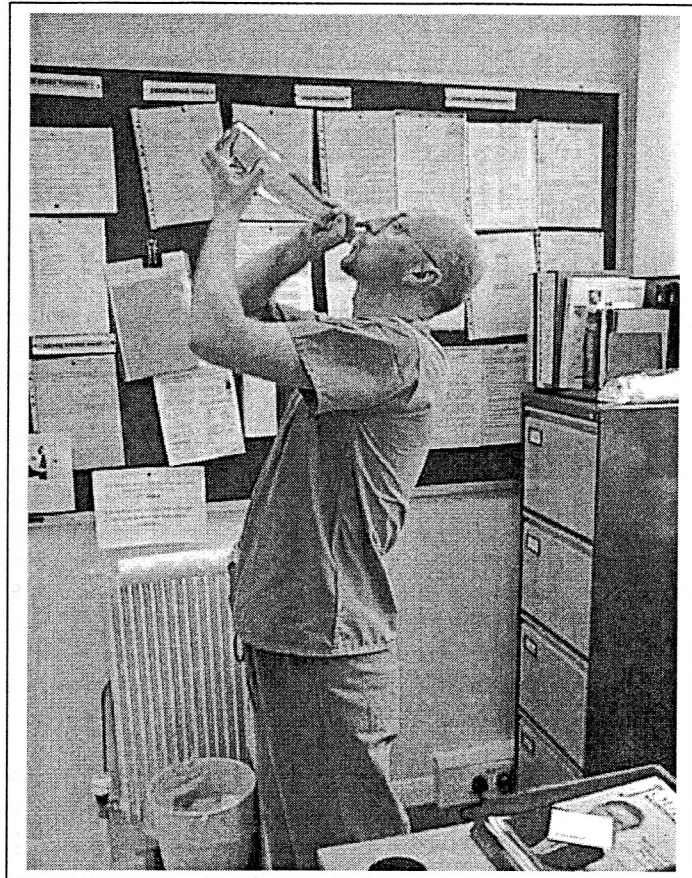
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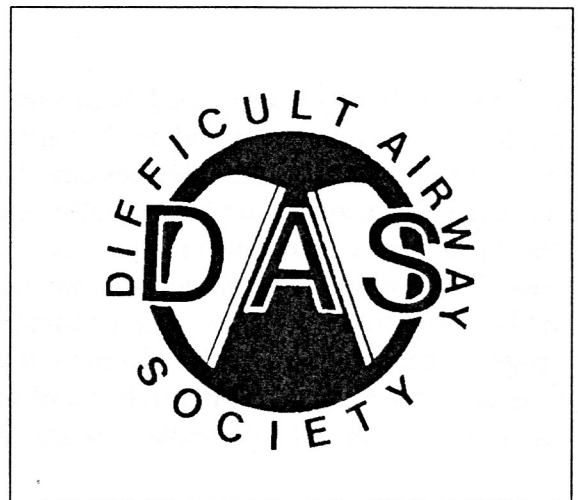
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## Newsletter

This newsletter was written by members of the Difficult Airway Society. The opinions expressed are those of the individual members and do not represent necessarily the view of the Society.

Any feed-back on this Newsletter, submissions for future editions or correspondence should be sent to;

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## From The Editor:

Those of you who keep up to date with the literature will recognise the editor (me) attempting to recreate Pemberton's paper from Anaesthesia April issue p402. If you haven't read it I'd recommend it – it made me laugh out loud – well written and well done to Anaesthesia for not taking themselves toooo seriously. It may interest some to know that Ed's social faux pas was not the catastrophic breach of etiquette suggested in the article but a loss of inhibition (resulting from demonstrating the experiment many times) leading to talk of prior convictions prison sentences and sundry other matters that should best be kept to ones self (hey ho!).

The Difficult Airway Society has been recognised as a source of common sense (can you believe it?) by the Anaesthesia subcommittee of the British Medical Association – our views were sought and duly given – see page 2.

Good news afoot, the DAS newsletter should become a bit more reliable with the appointment of two subeditors – Northampton has just appointed 2 new consultants with interest in difficult airways. That's what they said at the pre-interview creepfest anyway and I've got it on tape so they can't back out now!! Remember, as always, when you've read as much as you want of this leave it in your juniors room, they may fancy joining DAS, the application form is on the back, you could even encourage consultant colleagues to join!

In the papers you may have missed there's info in Today's Anaesthetist and the European Journal of Anaesthesiology on two new and one old airway device trying to break into the market. As discussed at DAS at Oxford, many of these devices have had little in the way of rigorous evaluation so read with a critical eye (AMD, airway tube and COPA –the latter I think has been discontinued). There's also an increasing amount of published material arriving about the proseal LMA I'd treat that in the same critical manner. As usual our contributors have worked hard with their trawls – thank you to them all. If you have any suggestions for style or content of this publication let us know – the address is at the top of this page. Letters are more than welcome – if you are sending them via email it would help if you could send stuff as attachments in word. If you know of meetings / courses that need publicising or you've got a clinical conundrum or a story of a particularly scary / hairy airway case let us know.

There's a section this issue looking at the anaesthetists view on the management of adult epiglottitis, the surgeons view and the intensivists views are to follow next time. This ties in with a nasty case on the sports page.

Chris Frerk

The Difficult Airway society was approached by the BMA (Anaesthesia subcommittee) to comment on a proposal that medical records should be destroyed after seven years. After an amount of soul searching the following reply was drafted, I hope it meets with your approval. (NB it's already been sent – there was a deadline)

Dear Dr \*\*\*\*\*

Thank you for canvassing the opinion of the Difficult Airway Society on the matter of destroying patients notes after 7 years.

While we are one of the largest specialist societies in UK anaesthesia, we are not representative of any of the political bodies of anaesthesia in the country and would recommend you also seek advice from the Royal College and the Association of Anaesthetists.

The executive officers of the Difficult Airway Society are of the opinion that destroying notes after 7 years would potentially lose all sorts of valuable information (not available anywhere else) relating to life threatening events associated with anaesthesia, from failed intubation through scoline apnoea, to anaphylaxis and Malignant Hyperpyrexia.

Whilst we recognise that many specialties are not interested in reviewing past medical records, this can lead to successful negligence claims (MPS UK casebook Winter 2001/2 p21). We also recognise that it may be difficult to locate records even when they have not been destroyed, particularly if they are located in another part of the country.

We understand the difficulties surrounding the keeping of large volumes of notes but know that many hospitals have overcome this by microfilming records for easy storage. Some hospital records departments also agree to keep in paper form any notes that have been tagged with an “alert sticker” highlighting an anaesthetic problem. This ensures ready access to contemporary accounts of anaesthetic difficulties allowing careful planning of subsequent anaesthesia to keep risks to a minimum.

We would suggest that this may be a better course of action than destroying potentially lifesaving information.

C.Frerk

On behalf of the executive officers of DAS  
(A.Pearce, P.Latto, M Popat)  
Request for topics for 2003 meeting

## Today's Anaesthetist

Experience with the Airway Management Device 2001:16; 67-68

Development and evaluation of the Airway Management Device 2001:16; 98-103

## European Journal of Anesthesiology

Airway management by physicians wearing antichemical warfare gear: comparison between laryngeal mask airway and endotracheal intubation. 2002:19; 166-9

Cuffed oropharyngeal airway as a suitable alternative to the laryngeal mask airway for minor outpatient surgery. 2002:19; 203-8

Use of the intubating laryngeal mask airway in ankylosing spondylitis for coronary artery bypass grafting 2002:19; 298-302

The laryngeal tube – 4 bits of correspondence 2002:19; 303-7

## Anesthesiology

The LTA cannula and difficult intubations 96:778.

A multicenter study comparing the ProSeal and Classic laryngeal mask airway in anesthetized, nonparalyzed patients 96:289-295.

Flexible lightwand-guided tracheal intubation with the intubating laryngeal mask Fastrach in adults after unpredicted failed laryngoscope-guided tracheal intubation 96:296-299.

Nasotracheal intubation: A randomized trial of two methods 96:51-53. *Less bleeding when red rubber catheter used*

Morphologic changes in the upper airway of children awakening from propofol administration 96:607-611.

Use of dynamic negative airway pressure (DNAP) to assess sedative-induced upper airway obstruction 96:342-345.

Another technique of facilitating a difficult intubation 96(3):778.

Isolated bilateral paralysis of the hypoglossal nerve after oral intubation for general anesthesia 96:245-7

Versatility of LMA-ProSeal for probe-passage 96:1033.

Can assessment for obstructive sleep apnea help predict postadenotonsillectomy respiratory complications? 96:313-321.

## Anesthesia and Analgesia

Fiberoptic orotracheal intubation in the left semilateral position 94:477-478. *Better than supine position in anaesthetised patient*

Difficult retrograde endotracheal intubation: the utility of a pharyngeal loop 94:470-473. *Intriguing – if no fiberoptic kit*

The modified nasal trumpet maneuver. *Anesth Analg* 2002; 94(2):467-469. *Used successfully in cannot-ventilate/cannot-intubate scenario*

When is an airway not an airway? 94:1040. *Challenges need for tracheal intubation*

Hiccupping and regurgitation via the drain tube of the ProSeal laryngeal mask 94:1042-1043.

Morbid obesity and tracheal intubation 94:732-736.

Long and narrow pharyngolaryngeal passage in difficult airway 94:478-479.

Alkalinization of intracuff lidocaine improves endotracheal tube-induced emergence phenomena 94:227-230.

Continuous patient oxygenation during endotracheal intubation through the LMA-Fastrack 94:766-767.

*uses tracheal tube rather than stabilizing rod*

Tension pneumothorax during flexible fiberoptic bronchoscopy in a newborn 94:512-513. *Another serious complication of oxygen insufflation through fiberscope*

A comparison of two tracheal intubation techniques with Trachlight and Fastrach in patients with cervical spine disorders 94:667-671.

Difficult endotracheal intubation as a result of penetrating cranio-facial injury by an arrow 94:231-232.

The Laryngeal Mask Airway ProSeal(TM) as a temporary ventilatory device in grossly and morbidly obese patients before laryngoscope-guided tracheal intubation 94:737-740. *Elective surgery performed using ProSeal LMA in 2 grossly obese patients in whom tracheal intubation had failed!*

Intubating laryngeal mask airway size selection: a randomized triple crossover study in paralyzed, anesthetized male and female adult patients 94:1023-1027.

The effect of chin lift, jaw thrust, and continuous positive airway pressure on the size of the glottic opening and on stridor score in anesthetized, spontaneously breathing children 94:494-499. *Nice fiberoptic study*

Esophageal insufflation with normal fiberoptic positioning of the ProSeal laryngeal mask airway 94:1036-1039.

## **Intl Anest Clinics: Winter 2001 and Spring 2002**

Nothing of note

## **Acta Anaesthesiologica Scandanavica**

Anatomical study applied to anaesthetic block technique of the superior laryngeal nerve. 2002; 46: 199.  
interesting anatomical pm study on the proximity of the S/L nerve to the Gtr  
horn of the hyoid. It's v close but no sex difference.

Combitube and difficult intubation 2002; 46: 339.

Only a letter but an interesting one. The use of the combitube can apparently result in cyanosis of the tongue or 'Chow-chow tongue' !! Several references and criticisms of technique for introduction of the combislayer and exhortations to look at the website, RTFM, etc etc!

## **Can J Anesth**

Effective nasotracheal intubation using a modified transillumination technique 2002 49: 91-95

Airway loss during tracheostomy 2002 49: 110.

Tracheal intubation in children with Morquio syndrome using the angulated video-intubation 2002 49: 198-202

Oral styletted intubation under video control in a patient with a large mobile glottic tumour and difficult airway 2002 49: 203-

Techniques for rigid stylet use during endotracheal intubation 2002 49: 217

Improving styletted oral tracheal intubation: rational use of the OTSU 2002 49: 217-218.

Single-lung ventilation in a pediatric patient using a pediatric fibreoptically-directed wire-guided endobronchial 2002 49: 256-

The OxyArm™ – a new minimal contact oxygen delivery system for mouth or nose 2002 49: 297-301

Submucous fibrosis secondary to chewing of quids: another cause of unanticipated difficult intubation 2002 49: 309-311.

Aspiration prevented by the ProSeal™ laryngeal mask airway: a case report 2002 49: 413-416.

The intubating laryngeal mask airway in severe ankylosing spondylitis 2002 49: 439

A normal capnogram despite esophageal intubation 2002 49: 439.

## **Anesthesia and Intensive Care**

The modified Cormack-Lehane score for the grading of direct laryngoscopy evaluation in the asian population 2002:30;48

Detection and correction of accidental oesophageal intubation during flexible lightwand-guided intubation via the intubating laryngeal mask 2002:30;??

Awake fibreoptic intubation under remifentanyl and propofol target controlled infusion 2002:30;93

Emergency percutaneous dilatational cricothyroidotomy after failed intubation 2002:30;101

Elective awake intubation in a patient with massive multinodular goitre presenting for radioiodine treatment 2002:30;236

ENT vs anaesthesia "straight" laryngoscopes 2002:30;??

**An adult patient with severe epiglottitis is in theatre undergoing an inhalational induction. The airway is very poor and the anaesthetist tries but fails to intubate. Bag movement is almost imperceptible and the oxygen saturations on 100% oxygen are now falling rapidly. Disaster is imminent - what should happen next?**

We invited differing views from an intensivist, a surgeon and an anaesthetist. Here we hear from the intensivist:

### **Percutaneous dilational tracheostomy in adult acute epiglottitis as back up plan after a failed inhalational induction.**

Percutaneous dilational tracheostomy (PDT) is now an established procedure in the long-term airway management of the critically ill patient. Over the last decade numerous studies have shown it as safe as surgical tracheostomy, with respect to both the incidence of immediate and delayed complications (1). In fact some studies suggest it may perhaps now be superior to an open surgical tracheostomy. With increasing experience and modification of the technique, PDT is now a viable option in the emergency management of the difficult adult airway. An increasing body of literature now supports this approach (2-4). Even in a patient with acute epiglottitis, it might be a safer procedure than the other options available, such as emergency surgical tracheostomy or needle/cannula tracheostomy, if an inhalational induction fails.

Until recently the type of PDT insertion technique most widely practised in the UK was the serial dilator technique. After skin preparation and local anaesthetic and adrenaline infiltration, this involves midline location of the trachea with a cannula, through a 1.5cm horizontal skin incision above or below the first or second tracheal ring. This is followed by insertion of a guidewire through the cannula, over which dilators of increasing size would be passed. Once dilatation with the largest dilator has been achieved (there are often 7 dilators), then a tracheostomy tube is inserted, mounted over one of the smaller dilators. This technique, even in the most skilled hands might take as long as 3-4 minutes. In reality this speed of placement has been confirmed in a laboratory setting using a pig tracheal model (5).

However, with the recent introduction of a single 'rhinoceros horn shaped' dilator, it is now possible to safely perform a PDT in approximately 60 seconds (6 and personal experience), making it a potentially useful technique in an emergency situation. As an intensivist and regular PDT 'teacher', in a hospital where approximately 350 PDT's are performed each year, observation shows that there are two critical steps which inexperienced operator's occasionally struggle with. These are the confident location of the trachea with the initial cannula, and the final placement of the tracheostomy tube after the percutaneous dilatation. Speedy and accurate location of the trachea comes with experience and thorough knowledge of the anatomy. Difficulty in placement of the tracheostomy tube is most often size dependent. Therefore, in an emergency situation, where the artificial airway might only be in place for a short period of time, use of a smaller tube (say, internal diameter size 7mm) would overcome this troublesome step. Until an operator has sufficient experience and reached the flatter part of the learning curve, use of the PDT as an emergency airway may still be a challenge too far. However, this latter point is more than equally valid for the other emergency airway options suggested by the other contributors.

Afterall, how frequently are needle/cannula cricothyrotomies performed? Very rarely I think, and although it is not that dissimilar a procedure from a PDT, it is not definitive and does not result in a secure airway protected from gastric contents. Moreover, how regularly are emergency surgical tracheostomies really performed? Yet in many large intensive care units in the UK, almost every other day a PDT is undertaken. This presents an invaluable opportunity for a significant number of doctors to become highly skilled in a potentially life saving intervention. It could be strongly argued that a proficient intensivist with a PDT kit, instead of a capable consultant ENT surgeon should be standing by watching the inhalation induction in a precarious airway, in case there is resort to plan B.

### **References**

1. Freeman BD, Isabella K, Lin N, Buchman TG. A meta-analysis of prospective trials comparing percutaneous and surgical tracheostomy in critically ill patients. *Chest* 2000;118:1412-8
2. Schachner A, Ovil J, Sidi J, Avram A, Levy MJ. Rapid percutaneous tracheostomy. *Chest* 1990;98:1266-70
3. Dob DP, McLure HA, Soni N. Failed intubation and emergency percutaneous tracheostomy. *Anaesthesia* 1998;53:72-4
4. Mazzone D, Zanatta P, Curtolo S, Bernadi V, Bosco E. Upper airway obstruction by retropharyngeal hematoma after cervical spine trauma: report of a case treated with percutaneous dilational tracheostomy. *J Neurosurg Anesthesiol* 1998;10:237-40
5. McLure HA, Dob DP, Mannan MM, Soni N. A laboratory comparison of two techniques of emergency tracheostomy. *Anaesthesia* 1997;52:1199-201
- L'her E, Goetghebeur D, Boumedienne A, Renault A, Boles J-M. Use of the Blue Rhino tracheostomy set for emergency airway management. *Intensive Care Medicine* 2001;27

# Forthcoming Meetings / Courses

## Difficult Airway Management Education Course

Three day symposium on Difficult Airway Management Education for anaesthetists - consultants and trainees. St. Mellons Hotel, Cardiff. Course organisers: Drs. Turley, Stacey and Morris.

Information available from: Michele Jones, Anaesthetic Department, Llandough Hospital, Penarth, Vale of Glamorgan CF64 2XX. Tel. 029 20716860. Fax. 029 205312. Email: Michele.Jones@UHW-TR.wales.nhs.uk.

Dates: 2nd - 4th October 2002, 7th - 9th May 2003, and 1st - 3<sup>rd</sup> October 2003

## Difficult Airway Society Annual Meeting

21<sup>st</sup> & 22<sup>nd</sup> November 2002 In London (details on the website or-)

Information available from: Diane Wallis, DAS 2002, Anaesthetic department, St Thomas Hospital, London SE1 7EH  
Diane.wallis@gstt.sthames.nhs.uk

**If you've got any topics you feel should be covered at the 2003 DAS meeting – suggested lecturers etc then drop us a line at [newsletter@das.uk.com](mailto:newsletter@das.uk.com) and we'll see that the organising committee get to hear about it. It's your society help it do what you want.**

## Correspondence

Hi Chris

I am stimulated to submit, for consideration by the Editor, a brief letter to the Newsletter.

"I have just read The Training Guidelines in Anaesthesia of the European Board of Anaesthesiology, Reanimation and Intensive Care, published in Eur. J. Anaesth. 2001; 18: 563-71. The suggested minimum number of procedures includes 10 pulmonary artery catheterisations, yet there is no recommended minimum number of fiberoptic intubations, which are relegated to a section of Special Procedures. What justification can there be for training in a technique which has probably caused more morbidity than it has prevented, and failing to promote the most versatile airway technique, which can reduce airway anaesthetic complications (the most important cause of problems in the closed claims studies)?

What can be done about this madness? Perhaps a little more spinal cord or other neural material is needed."

Hope this benign communication is acceptable

John

*Seems absolutely barking to me. I often wonder about these things thinking it must just be me that thinks the world is going mad so it's nice to know that others can see the lunacy around us. (Ed) Any readers with an interest in European training might care to highlight this issue to the powers that be – I'd have thought a copy of this letter to the EJA (perhaps missing out the last sentence would be a good idea)*

# SPORTS PAGE

One evening on call, a consultant anaesthetist was contacted by the anaesthetic registrar who had seen a lady who had ingested a caustic substance and was sitting forward drooling unable to swallow and complaining of a change in her voice! How would you manage that one?



This particular case was managed as described below (thanks for letting us use it):

With the consultants go ahead the Spr did a gas induction and when the patient got deep enough did a direct laryngoscopy. Despite a lot of mucosal oedema he was able to see the cords and so replaced the facemask preoxygenated the patient and then gave suxamethonium. After fasciculation at repeat laryngoscopy he was unable to see the cords anymore!... Oh pooh he thought. He tried a bougie behind what he thought was a swollen epiglottis but without success.

Starting at the top I would say whatever the plan it may be best starting with a drying agent cos if you're doing awake or asleep you really don't want a mouth full of secretions blocking your view or irritating your cords. The next bit depends on your level of experience with either awake fiberoptic, access from the front of the neck or a gas induction, they may all be acceptable. All the airway folks I've spoken to agree (so far) that with a *difficult* airway if you see the cords at laryngoscopy after a gas induction put a tube in there and then! The final point though is that (in my opinion) whilst accepting the urgency of these situations really an Spr shouldn't be doing these difficult cases without direct consultant supervision (time permitting)

## Application Form For Membership of Difficult Airway Society

If you would like to join the DAS, a non threatening, non expensive society then just photocopy this form fill it in and return it to the membership secretary: Dr Mansukh Popat, Dept Anaesthesia, John Radcliffe Infirmary, Headley Way, Headington, Oxford OX3 9DU. Or email him [secretary@das.uk.com](mailto:secretary@das.uk.com)

Name .....

Address\* .....

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email .....

Grade      Cons   SpR   SHO   Staff Grade   Other.....

In which specialty do you meet difficult airways .....