



the needle, the gag reflex will be present once again within seconds. If the needle is re-inserted the gag reflex will once again disappear. Consequently we believe that leaving the needle in situ for the whole procedure, may give different results.

Patient selection is another factor which must be considered. In our study only patients who had previously demonstrated a severe gag reflex were included. This information is not available from Mitchell's work and may have influenced the outcome.

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### A reply

We would like to thank Dr Rosted for his comment on our study. The aim of our work was to assess acupuncture as an adjunct to reduce the gag reflex which could then be applied during an awake fibreoptic intubation procedure [1].

As mentioned, we used a minimalist technique. Filshie and White [2] suggest a minimalist technique is as effective as a longer technique, although this was not specifically in relation to gag suppression. The needle was removed for practical reasons as volunteers were inserting the airway devices themselves and we felt it would be difficult for the subjects to retain the needle in the chin and insert the airway device. In addition, the sham needle device was not ideal in retaining the needle in position so blinding of the placebo and study group would have been void. We appreciate Dr Rosted's comment on

improved success associated with leaving the acupuncture needle in situ, and will take this into consideration for future use, if the needle does not impede the procedure.

As to the degree of gag reflex, this was a cohort of volunteers whose degree of gag was unmeasured prior to participating in this study. No-one considered as a 'psychological gagger' or Grade 5 on the modified Gag Severity Score [3] volunteered to participate in the study. Fifty-five percent of volunteers were assessed to be 'severe gaggers' with a modified Gag Reflex Score greater than two as a baseline measure. Volunteers were randomly allocated to one arm of the study prior to the Gag Reflex Score being assessed. Our conclusion was that patients with a severe gag reflex in particular may benefit from acupuncture to suppress the gag reflex as an adjunct to topical anaesthesia in awake fibreoptic intubation.

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### Bag-mask ventilation in rapid sequence induction

We read with interest Koerber et al.'s [1] survey on modifications to the

traditional technique of rapid sequence induction. It would be interesting to ask a question about a further modification: the use of bag-mask ventilation after administration of drugs yet prior to intubation.

Traditional and current teaching avoids any positive pressure ventilation after drug administration for fear of gastric insufflation, and the increased hazard of regurgitation and pulmonary aspiration [2]. Some texts however are more circumspect, notably Miller, who references Sellick's original paper which states 'during cricoid pressure the lungs may be ventilated by intermittent positive pressure without risk of gastric distention' [3, 4].

There is evidence that significant gastric insufflation is unlikely to occur during positive pressure ventilation with correctly applied cricoid pressure [5–7]. We feel that the traditional teaching is potentially detrimental in certain patient subgroups, notably those with high oxygen consumption and/or low functional residual capacity where pre-oxygenation is less effective. Indeed many paediatric anaesthetists, intensivists and emergency physicians will regularly ventilate during a rapid sequence induction for this very reason [8].

We feel that in such subgroups gentle bag-mask ventilation early in the sequence, can not only prevent significant desaturation, but also gives additional time should a difficult intubation result. This may be of increasing relevance with the rising popularity, demonstrated by Koerber [1], of rocuronium in modified rapid sequence. The time taken between administering drugs and achieving good intubating conditions is arguably longer and the end point less defined than with suxamethonium, increasing the period of time in which hypoxia may intervene. Successful bag-mask ventilation also reassures the practitioner that, in the event of a failed intubation, ventilation and oxygenation are possible, in accordance with the Difficult Airway Society algorithms [9].

Gentle ventilation during rapid sequence induction is, as most things in

anaesthetics, a balance of risks (aspiration) and benefits (preventing desaturation). Given the available evidence, routine exclusion of ventilation from a rapid sequence induction does not seem justified. Indeed it may have significant advantages in many patient sub-groups. Anecdotally, this technique is increasing in our region, something we plan to investigate more formally.

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### Rapid sequence induction: an evolving beast

Koerber et al.'s [1] survey illustrated some interesting points about variation in the practice of Rapid Sequence Induction. These included the fact that consultants tended to deviate from the textbook 'preoxygenate-thio-sux-cricoid-tube' technique and that the majority of Welsh anaesthetists were using opioids as part of their induction. Furthermore, a loose definition of Rapid Sequence Induction needed to be adopted in their survey, namely a 'tracheal tube-cricoid pressure' technique, suggesting that a wide variety of techniques are being employed in patients deemed at risk of aspiration.

We completed a similar survey (between October and December 2008) in two large teaching hospitals in the East of Scotland with an 82% response rate (138 replies). Interestingly, pre-oxygenation was not universal, with 20% of consultants and 7% of trainees confessing to not always performing it. This deviates from Morris and Cook's findings, who found 100% pre-oxygenation in their national survey of 2001 [2]. Similarly, there was variability cricoid pressure use in 'Rapid Sequence Induction' patients and in the choice of induction and neuromuscular blocking agents.

Of particular note was the fact that we too found the trend towards opioid use in Rapid Sequence Induction, with 70% 'usually or always' administering one. Interestingly, this included junior trainees, despite it being explicit in our 'new-start' handbook that only thiopentone and suxamethonium were to be used. It is still widely believed that junior trainees should describe a 'traditional' technique when discussing Rapid Sequence Induction in the Primary examination of the Fellowship of the Royal College of Anaesthetists, in the United Kingdom. Both our survey and the Welsh one raise the obvious question: Is more guidance required on the teaching and practice of the (non-evidence-based) Rapid Sequence Induction to reflect the change in current practice? Ninety percent of all our respondents thought so.

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### The lipid resuscitation story: past and future

I commend the editors of *Anaesthesia* for publishing two studies in the February 2009 issue [1, 2] on the clinical use of lipid resuscitation and an accompanying editorial [3] on the current state-of-the-art. Indeed, I've already cited the survey by Picard et al. as evidence for the general acceptance of this treatment, at least for local anesthetic toxicity. Furthermore, I praise Drs Picard and Harrop-Griffiths for their editorial and entirely concur that the Association of Anaesthetists of Great Britain and Ireland deserves credit for the rapid spread of lipid use in the United Kingdom. However, I would like to point out two aspects of the development of this story that were missed in this excellent editorial.

First, it was Dagleish and Kathavaroo [4] who authored the letter to *Anaesthesia* that first pointed out the experimental literature supporting the use of lipid in severe local anesthetic toxicity. This letter was '...read with glee' at the time by Drs Picard and Meek, and provided the impetus to stock lipid emulsion at their respective facilities and to 'exhort others to do the same.' Therefore, I would like formally to acknowledge the important contribution of Drs Dagleish and Kathavaroo in getting this ball rolling.

Next, I will mention what I see as an unwarranted nationalistic tone in the