

"Conventional stylet" intubation - a misunderstood and misused concept

To the Editor:

In their article¹ the authors, using controlled axial stabilization to simulate standardized intubating conditions, conclude that a StyletScope™ "is a better intubation tool than a conventional stylet" during difficult laryngeal view. As readers, we understand what a StyletScope™ is by its physical dimensions, shape, and instruction for use. But what is "a conventional stylet", and when and how should it be employed? The study protocol indicates the manner of intubation, while using a 7.0-mm stylet tube and #3 Macintosh laryngoscope blade, was arbitrarily modified when a single operator subjectively judged that a problem existed during intubation. The tube was introduced under direct vision during grades 1 and 2 laryngoscopies, but moved blindly towards the larynx when the operator determined a grade 3 exposure was present. No attempts were made with grade 4 views.

In principle, this approach vaguely resembles steps that might be followed by some anesthesiologists when confronted with a difficult laryngoscopy. However, we all realize that the practical execution involving laryngoscopy, constructing a stylet tube, and introducing it into the trachea is as varied as the number of anesthesiologists, since no proven and widely accepted system of intubation using a stylet tube exists. At best, a description of stylet intubation consists of a few lines in most textbooks ending with a comment that the hockey stick-shaped tube should be used in a fall back technique when conventional intubation fails. Only one conclusion is possible from this paper, that is, the operator was more skilled in using a StyletScope™ than his personal version of "conventional stylet" intubation, at the time he felt intubation became difficult.

Importantly, one observation confirmed by the study was not addressed. What were the reasons for the unacceptable, high failure rate with stylet intubation during grade 3 laryngoscopies, and why was no attempt made with grade 4 views, since use of a stylet tube is almost always recommended as the first line of defense during problem intubations? The danger of never asking this question lies in never discovering the reasons governing effective use of a stylet endotracheal tube. Without scientific curiosity demanding evidence-based results, the belief that improving outcome during difficult laryngoscopy is achievable solely through developing newer and more complicated instruments beyond the standard laryngoscope, endo-

tracheal tube and stylet, will remain entrenched forever. This mindset avoids the responsibility of acknowledging and dealing with the irrefutable fact that conventional intubation, as again demonstrated in this paper, works well only with simple laryngoscopies but fails progressively as laryngoscopic view deteriorates. Only after the problem is acknowledged can a solution be found by systematically analyzing conventional intubation for its strengths and by improving its weaknesses. The ultimate goal, of course, is to develop a comprehensive method of routine intubation that is practical and equally effective both during simple and difficult laryngoscopies.²

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References

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- 2 Stasiuk RB. Improving stylet oral tracheal intubation: rational use of the OTSU. *Can J Anesth* 2001; 48: 911–8.

REPLY:

We thank Dr. Stasiuk for expressing his specific concerns about our paper and his general concerns about the state of play of evidence-based airway management research and practice. We will mostly confine our response to the former, as we concur with much of the latter, albeit in a less emotive fashion.

First, although there are perhaps a dozen or so variations on using a stylet (there are certainly not as many variations as there are anesthesiologists!), we considered that ours was a reasonable simulation of what happens during difficult laryngoscope-guided tracheal intubation. Second, the "unacceptably high failure rate" (in fact only 13%!) when using the conventional stylet in simulated Cormack and Lehane grade 3 patients was due to resistance at the level of the glottic inlet. Third, we did not attempt to use the conventional stylet in simulated grade 4 patients, as we knew this had a very low success rate, and we felt it was unfair to subject our patients to near-certain airway management failure. Should we have included this subgroup, the differences between the StyletScope™ and conventional stylet would probably have been much greater.

Finally, we disagree that the stylet is "almost always recommended as the first line of defense during problem

intubations". Higher on the recommended list would be the tracheal tube guide or gum elastic bougie. Another increasingly recommended option would be to use the intubating laryngeal mask airway, which has a considerable body of evidence supporting its use during both simple and difficult laryngoscopies.¹

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