

Use of the McGrath Videolaryngoscope in difficult intubations – a case series

G Thompson, J Drake, DJA Vaughan

Anaesthetic Department, Northwick Park Hospital, Harrow, Middlesex HA1 3AJ, UK

Introduction - Videolaryngoscopy has been shown to improve glottic view in both mannequin(1) and patient(2) intubation studies, as the image is obtained from near the blade tip. Many devices exist in the market for this purpose, but few are self contained and fully portable for rapid use. The McGrath VL is a small, battery powered unit with excellent optics via a screen attached to the handle. We have compared the best glottic view (Cormack and Lehane (CL) score) obtained with a standard/long Mackintosh blade at laryngoscopy with that obtained using the McGrath in patients who are proven difficult intubations.

Methods - 54 patients were studied (15 female, 39 male, age range 17 to 87 years) from a range of surgical specialities. All patients had their CL grade established under standard conditions. VL with the McGrath was then performed and the view on the screen was assessed and documented. The time taken to intubate using the McGrath, prior experience of VL and use of intubation aids were also recorded.

Results – see table below. All 53 patients were documented as having a C&L grade 1 view using the McGrath. There was one failure – a patient who had 1cm mouth opening post radiotherapy. In six cases it was the first use of the McGrath by the intubating anaesthetist. No complications were encountered in any of the patients.

View With standard laryngoscopy		View with McGrath Videolaryngoscope	Time to intubate, seconds (mean; SD)	Intubation aids used (stylet/bougie) n
CL Grade	Number			
CL 2	4	All Grade 1	68; 49	3 (75%)
CL 3	36		46; 31	25 (69%)
CL 4	13		42; 19	7 (54%)

Conclusion - Use of the McGrath video laryngoscope was shown to improve the CL to grade 1 in all the cases in this study, facilitating swift intubation. This occurred independently of both the grade and experience of user of the VL, supporting the view of previous studies (3) that it is an easily learnt technique, and extending this to use in difficult intubation. Use of VL requires less expertise and training than other methods of managing difficult intubation and our study indicates this is an important tool in the management of these cases. The data also indicate no relationship between difficulty of standard view and ease of intubation, as the intubation times did not differ.

References

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