471592 - GLIDESCOPE VS DIRECT LARYNGOSCOPY IN NASOTRACHEAL INTUBATION

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Introduction: The GlideScope® videolaryngoscope (GVL) provides a consistently good laryngoscopic view when used for orotracheal intubation.(1) In the context of nasotracheal intubation, the GVL has shown to be superior to direct laryngoscopy when used by airway management novices (2) and, in an observational trial, the GVL has demonstrated a high intubation success rate. (3) However, no study has compared direct laryngoscopy to GlideScope® videolaryngoscopy for nasotracheal intubation in a prospective, blinded, randomized clinical trial. This study was performed to test whether direct laryngoscopy is superior to the GVL for nasotracheal intubation, as judged by the time to intubation (TTI - the primary outcome) and the ease of intubation.

Methods: After written informed consent and REB approval, 70 patients having elective surgery requiring nasotracheal intubation were randomized to either direct laryngoscopy or GlideScope® videolaryngoscopy. All operators had experience using the GVL for orotracheal intubation, but not necessarily for nasotracheal intubation. Exclusion criteria included: age < 18, a known or suspected difficult airway, cervical spine instability, or patients requiring rapid sequence induction. The operator was blind until intubation began. TTI was assessed by a blinded observer. Ease of intubation was recorded by the operator on a 100 mm visual analogue scale (0 - easy, 100 - difficult). Two minutes after intubation, oropharyngeal suctioning was performed, and the degree of blood present was qualitatively recorded. On post-operative day one, the patient was asked about the presence and severity of a sore throat.

Results: SEE TABLE. The median TTI was 23.2 s faster with the GVL than with DL. Nasotracheal intubation was easier with the GVL than with DL. The incidence of postoperative moderate or severe sore throat was significantly reduced in the GVL group (9% versus 34%, $P = 0.018$). Glottic exposure was significantly better with the GVL. Magill forceps were not used in the GVL group, but were employed 49% of the time in the DL group, $P < 0.0001$. The incidence and severity of bleeding were similar between groups.

Discussion: Compared to direct laryngoscopy, the GlideScope® has superior performance characteristics when used for nasotracheal intubation and demonstrates an important reduction of postoperative sore throat. The GlideScope® has a clear role in routine nasotracheal intubation.

References: 1. Can J Anaesth 2005; 52: 191-8. 2. Can J Anaesth 2006; 53(11): 1163-4. 3. J Clin Anesth 2006; 18: 611-5.

Outcome	DL (n = 35)	GS (n= 34)	P
Time to intubation, s, median (IQR)	66.7 (53.8, 89.9)	43.5 (39.8, 67.3)	0.0023
Ease of intubation VAS, mm, median (IQR)	20 (10, 32)	10 (5.5, 18)	0.0041
Moderate or severe sore throat, n (%)	12 (34)	3 (9)	0.018
Cormack-Lehane laryngoscopic grades, n (%)			
Grade 1	23 (66)	32 (94)	0.0057
Grade 2 and higher	12 (34)	2 (6)	
Moderate or copious bleeding, n (%)	6 (17)	8 (24)	0.56