1344456 - OPTIMIZING AIRWAY MANAGEMENT: THE ROLE OF A MODIFIED GLIDESCOPE TECHNIQUE

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Introduction: The GlideScope® is a video laryngoscope that allows visualization of endotracheal tube placement, and is often utilized in management of the difficult airway.¹ The GlideScope® is designed to provide a view of the glottic opening but this view is often compromised during manipulation of the tube. Recent studies have looked at ways of improving intubation times with the GlideScope®. ²,³ The aim of this study is to evaluate the time to secure the airway using a modification of the traditional GlideScope® technique that involves the simultaneous insertion of both the GlideScope® blade and the endotracheal tube.

Methods: Following ethics board approval and informed consent, 42 undergraduate medical students and 24 experience anesthesia providers participated in our prospective blinded cross-over study. Each participant received standardized instruction and viewed a video demonstration of both intubation techniques using the GlideScope®. Two attempts at intubation with the GlideScope® using both the traditional and modified technique were performed on an airway task trainer(Lardal) in a randomized fashion. The primary outcome of the study was time to intubation (sec) with each technique. Secondary outcomes included the number of attempts, optimal view obtained, ease of intubation technique and their comfort in performing the procedure.

Results: The modified GlideScope® technique was easily taught to both novice and experienced users and overall performance was similar to the traditional technique (Figure #1). Time to intubation was significantly shorter in experienced users for both techniques (26s vs. 39s standard; 25s vs.39s modified, p<0.001). Success on the initial attempt was high for both techniques (83% novice, 93% experienced). In follow-up, 11/23 experienced users (48%) stated they would incorporate the modified technique in their future practice.

Discussion: User performance was similar for both techniques despite the fact that experienced users had no prior experience with the modified technique. We believe that the modified technique has the potential to reduce intubation times via a reduction in the time from visualization of the glottis to passage of the endotracheal tube. This and other potential benefits could be further assessed in future trials focusing on users who had acquired significant clinical experience with both techniques.