Awake Face-to-Face Laryngoscopy: GlideScope vs. Fiber-Optic Scope

In a small study of healthy volunteers, both techniques achieved good views of the larynx.

When difficult intubation is anticipated in a spontaneously breathing patient, "awake" intubation without use of a neuromuscular blocking agent is indicated. This is traditionally accomplished with flexible fiber-optic intubation, which is convenient to perform in seated patients. In a randomized crossover study of 23 healthy awake seated volunteers, these authors compared visualization of the larynx with GlideScope video laryngoscopy and flexible fiber-optic laryngoscopy. Operators were two emergency medicine residents and two EM attending physicians, each of whom had used these techniques <10 times.

Before undergoing laryngoscopy, patients received nebulized 5% lidocaine followed by atomized 4% lidocaine sprayed into the nose and oropharynx as needed (maximum dose, 9 mg/kg); oxymetazoline was also applied nasally before fiber-optic laryngoscopy. A good view of the larynx (Cormack-Lehane grade I or II) was attained in similar proportions of GlideScope and fiber-optic laryngoscopies (96% and 100%). Median time to attain the highest-grade view was 35 seconds faster with the GlideScope than with the flexible fiber-optic scope (16 vs. 51 seconds).

Comment: This study demonstrates that the GlideScope can achieve a good laryngoscopic view in awake seated healthy volunteers. Although this study was limited to laryngoscopy (without intubation), its results are compelling because technical proficiency is more rapidly attained with video laryngoscopy than with flexible endoscopy. A trial that includes intubation is needed, but, in the meantime, the GlideScope is a reasonable device for awake upper airway examination and intubation for patients in the upright position.

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