

# C-Spine Movement During Intubation

*Use of the GlideScope is associated with less movement than conventional laryngoscopy when the C-spine is not secured.*

Minimizing movement of the cervical spine (C-spine) during emergency intubation is a core principle in the care of trauma patients. To compare C-spine movement with video versus standard laryngoscopy, researchers in Germany randomized 60 patients undergoing elective surgery to intubation with the GlideScope or Macintosh laryngoscope. Patients' spines were not secured, but anesthesiologists were asked to minimize C-spine movement. Markers were placed on patients' heads and necks and their movement was video-recorded; investigators analyzing the videos were blinded to the device being used.

The median angles of neck extension from baseline were 11.8° in the GlideScope group and 14.3° in the Macintosh group. Maximum angles were 19.2° and 29.3°, respectively. Median time to successful intubation was 24 seconds in the Macintosh group and 53 seconds in the GlideScope group. Three patients in the Macintosh group who could not be intubated after several attempts were subsequently intubated using the GlideScope.

**Comment:** This carefully done study demonstrates that use of the GlideScope substantially reduces cervical spine movement in sedated, paralyzed patients, even in the absence of in-line stabilization. This reduced movement is probably a fair tradeoff for the longer time required for GlideScope intubation, especially given the 10% failure rate in the Macintosh group. All in all, another feather in the cap of video laryngoscopy.

— [J. Stephen Bohan, MD, MS, FACP, FACEP](#)

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