

Video Laryngoscopy Improves Intubating Success

Lara C. Pullen, PhD | November 14, 2013

CHICAGO — For fellows in pulmonary and critical care medicine, training with a video laryngoscope, rather than a direct scope, improves first-pass success and decreases the complications of urgent endotracheal intubation, a new study has found.

"I think everybody should be using the video laryngoscope, at least nonanesthesiologists," said Michael Silverberg, MD, from Beth Israel Medical Center, in New York City.

Although research has shown that video laryngoscopy improves glottic visualization during elective surgery in the operating room, direct laryngoscopy is routinely used to perform uncomplicated endotracheal intubation outside the operating room.

This study was designed to test the effectiveness of video laryngoscopy outside the operating room.

Dr. Silverberg presented the research here at CHEST 2013, where he is a semifinalist for the Young Investigator Award.

The researchers compared video with direct laryngoscopy in a prospective randomized controlled trial conducted at an 856-bed medical center with a closed 16-bed medical intensive care unit.

The 153 study participants "were fairly sick," Dr. Silverberg noted. Patients undergoing elective intubation, those with a known history of difficult intubation, and those who had a limited mouth opening were excluded.

The first-pass success rate for fellows in pulmonary and critical care medicine was significantly better with the video laryngoscope than with the direct laryngoscope. After 2 attempts with the direct laryngoscope, fellows were instructed to switch to the video laryngoscope.

Table. Laryngoscopy Success Rates

Outcome	Video Laryngoscope, %	Direct Laryngoscope, %	P Value
First pass	74	40	<.001
Second pass	17	20	<.001
Third pass (all video laryngoscopy)	81	—	—

The rate of complications was very low, compared with other studies, Dr. Silverberg reported.

"The only issue I have with this study is how it was designed," said session comoderator Carlos Ortiz, MD, senior vice president of medical services and medical director of Thompson Health, in Canandaigua, New York.

"Some of the results may be a consequence of a preconceived notion. It is randomized, but the people doing it were trying to prove that the technology is better," Dr. Ortiz told *Medscape Medical News*.

Many audience members reacted more positively. This is "very helpful and may change policy," said one. "I love it. It's beautiful," said another. The audience had a lively discussion about the results, and there was general agreement that the findings are consistent with real-life experience.

After his presentation, Dr. Silverberg initiated a training discussion by asking some basic questions. Should the video laryngoscope be used as the primary device by nonanesthesiologists? Does use of the video laryngoscope affect the acquisition of direct laryngoscopy skills? What is the best method for training?

The audience seemed to agree on the use of the video laryngoscope. However, Dr. Ortiz wondered whether video laryngoscopy and other technology-based training procedures are the most beneficial to the patient.

"Technology is here," he said. But what is the best way to use it? He described traditional training, when fellows would "watch one, do one, teach one." In contrast, he noted, the younger generation has been raised on technology and seems to respond well to training with technology.

Dr. Ortiz explained that, in his opinion, the best use of the new technology is to train on infrequent techniques and on how to deal with the unexpected. This type of training might improve the response to a rare complication by someone who is a trainee, he explained.

Dr. Silverberg and Dr. Ortiz have disclosed no relevant financial relationships.

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