Do Novices and Experts Hold a Laryngoscope Differently?

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Yes, and it’s all in the grip.

Direct laryngoscopy is a complex skill that requires both practice and proper instruction to master; however, specific teaching on handle grip and angle varies. A handle angle of 45° from horizontal is commonly taught as the best laryngoscope position for obtaining an optimal glottic view. To study differences in technique between expert and novice laryngoscopists, researchers took photographs during routine intubations of elective surgery patients (22 experts) and mannequins (22 experts and 21 novices).

All intubations were performed in full sniffing position with a Macintosh size 3 or 4 blade. Images were acquired at the point of maximal glottic exposure. Novices were medical students beginning an anesthesia rotation, and experts were attending anesthesiologists or senior anesthesia trainees (PGY-4 or higher).

When intubating patients, experts used a handle angle of 23.7° — significantly less than 45°. During mannequin intubations, the average angle used by experts and novices did not differ significantly (26° vs. 31°). Compared with novices, experts gripped the handle closer to the hinge, held the device in the fingers rather than the palm, and used a greater mean eye–scope distance. Experts did not change their technique when intubating mannequins versus patients.

Comment: We know that novices have higher success rates with video laryngoscopy than direct laryngoscopy. However, if a direct laryngoscope is used, proper technique is important. Focusing on proper hand position, grip, and laryngoscope angle that provides the best view may optimize technique for early trainees.

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