Cricothyrotomy: Seldinger Versus Surgical Technique

Debate persists regarding whether cricothyrotomy is best performed using the Seldinger or conventional surgical technique (see *JWEM* Feb 2000, p. 11, and *J Emerg Med* 1999; 17:957). Investigators in Vienna provided a 60-minute training session consisting of lectures, slides, and the tools for each method to 20 ICU residents and fellows not experienced in cricothyrotomy. Each physician then performed each maneuver on different cadavers in random order. A researcher pressured physicians by warning them about elapsed time.

There was no measurable difference between the cadavers used for each procedure. Tracheal cannulation was achieved in 70% and 60% of the surgical and Seldinger procedures -- not a significant difference. Failures were caused by misplacement in the surgical group and misplacement or wire kinking in the Seldinger group. Times to location of the cricothyroid membrane (7 vs. 8 seconds), tracheal puncture (46 vs. 30 seconds) and first artificial ventilation (102 vs. 100 seconds) were not statistically different with the 2 methods. The authors conclude that the 2 methods "showed equally poor performance."

Comment: This result primarily shows that procedures cannot be learned from lectures. No doubt a training lecture on laryngoscopy and intubation would have yielded similar performance results. Critical technical skills, such as cricothyrotomy, must be taught (and learned) by expert instruction and supervised performance of the procedure using an appropriate model.

— RM Walls

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