

M. FINSTER, M.D.
G. R. ARTHUR, PH.D.
B. G. COVINO, PH.D., M.D.

Departments of Anesthesiology, Obstetrics and Gynecology
College of Physicians and Surgeons

Columbia University
New York, New York
and
Brigham and Women's Hospital
Harvard Medical School
Boston, Massachusetts

(Accepted for publication May 30, 1986.)

Anesthesiology
65:347, 1986

Securing an Endotracheal Tube

To the Editor:—Endotracheal tubes are often secured with ties. Two knots are commonly used: one around the tube itself, and a second to secure the tube to the patient.

Most practitioners use a square knot (sometimes mistakenly a granny knot) around the endotracheal tube. Use of the square knot can present two problems. First, the initial overhand knot (half of the square) can loosen easily. If this is not corrected before the second half of the square is placed, the tube will slip or slide beneath the knot. When a square knot is tied properly, it is difficult (if not impossible if it is a granny) to loosen if the tube requires repositioning.

Surgeons, sailors, and even boy scouts are taught: 1) knots were designed to help, not hinder; and 2) experience mates the "knot to the job." Accordingly, I believe that a knot known as a clove hitch is the "right" knot for securing endotracheal tubes.

The clove hitch is simple, straightforward, and easy to tie. When placing the knot around an object like an endotracheal tube, it may be tied as shown in figure 1. Advantages of the knot include: 1) it can be loosely placed and then tightened after correct positioning of the tube is confirmed; 2) if the knot loosens, it can be retightened by pulling on opposite standing parts; and 3) the same knot can be loosened and again used to secure the tube should auscultation or roentgenogram indicate that repositioning is necessary.

JAMES G. GONZALES, M.D.
Department of Anesthesiology
University Hospitals
Case Western Reserve University
2078 Abington Road
Cleveland, Ohio 44106

(Accepted for publication May 30, 1986.)

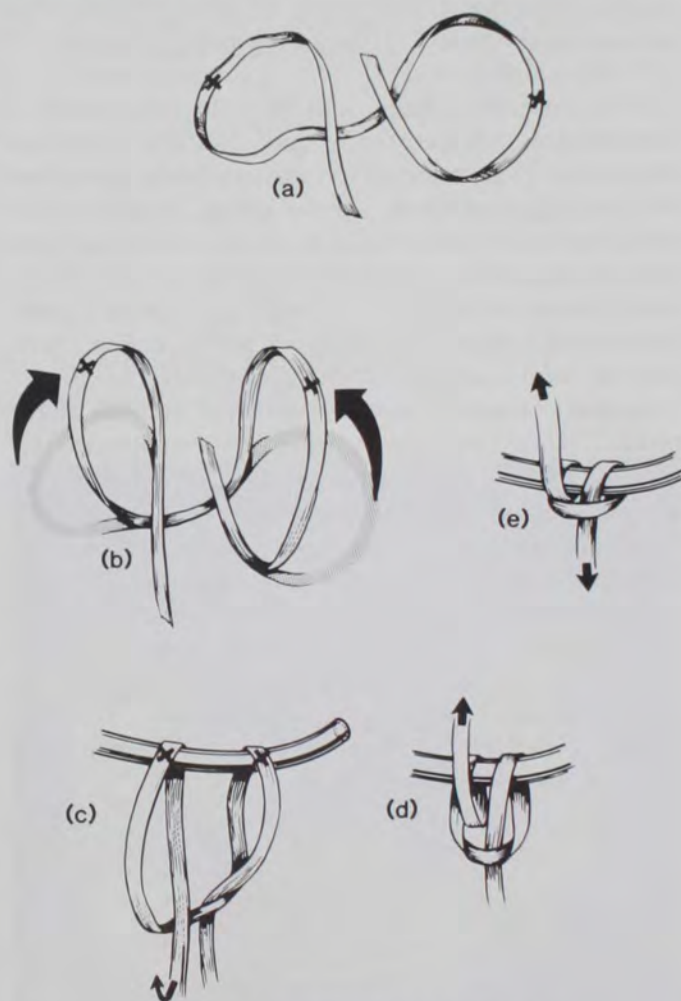


FIG. 1. A-E. Steps for tying a clove hitch to secure an endotracheal tube.