GADGETS

A Device for Emergency Cricothyrotomy

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Dr. Abelson has developed a device for emergency cricothyrotomy. The device consists of a cannula, a trocar and an oxygen tubing assembly. The cannula presents a red marker one half inch from the end. There is a notched flange on the distal portion of the cannula. When the notch is cephalad, it denotes that there has been no rotation which conceivably might cause the cannula to injure the vocal cords. The flange should lie on the skin surface where it serves for fixing to the neck. The cannula terminates in a Luer-Lok fitting which permits hookup with the oxygen tubing assembly.

TECHNIQUE OF INSERTION

(1) Immobilize the thyroid cartilage by grasping with the fingers of one hand.
(2) Slide the index finger along the midline to locate the cricothyroid membrane.
(3) Insert the cannula percutaneously through this membrane directing the cannula in the midline up to the red marker, at which point the trocar is removed. A blast of air indicates its lumen to be in the trachea.
(4) Gently guide the cannula into the trachea following its natural curve, with the notch uppermost until the flange rests on the skin.
(5) Secure the flange to the neck by adhesive tape.

If a source of oxygen is available, the cannula can be attached to oxygen source by appropriate connections. An arrangement can be made easily to facilitate artificial ventilation.

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If no oxygen is available, mouth to tracheal cannula artificial respiration should suffice to produce satisfactory expansion of the lungs.

Since 1961, this cannula has been included in the course of instruction at the Chevalier Jackson Clinic in Philadelphia. Adequacy of ventilation tests were studied by Dr. Charles Cook, Department of Physiology, Harvard University in 1961.

Trocar and cannula. Overall length cannula 2.37 inches; outside diameter, 18/00 inch; inside diameter, 15/100 inch; Marker, 1/2 inch; cannula to flange, 2 inches.