A FORCEPS FOR THE MANIPULATION OF ENDOTRACHEAL TUBES

In introducing an endotracheal catheter nasally, one frequently resorts to the use of a forceps to guide it into the trachea under direct vision. The currently available forceps designed for this purpose, in our experience have not always been satisfactory. The jaws slip off the lubricated end of the catheter, they do not grip the tube firmly enough to allow a change of direction, or the field of vision is obscured by the operator's hand.

A forceps for the manipulation of an endotracheal catheter should have the following features: (1) it should be long enough to reach the larynx; (2) it should be offset in one axis so that the operator's hand does not obscure the grasping end of the instrument; (3) it should be offset in only one axis to facilitate ease in handling; (4) it should take up a minimum of the limited space available in the oropharynx and hypopharynx; (5) it should firmly grasp the catheter; (6) it should offer enough leverage so that the direction of the catheter can be changed with ease.

By modifying a uterine dressing forceps, an instrument which fills these criteria can be made (fig. 1, A and B*). Its length (25 cm.), together with the sigmoid curve of its profile axis of 2 cm. allows for ease in handling and unobstructed vision. The distal ends of the blades which are 4 mm. wide and 2 mm. thick may be bent into a circular recess 1 cm. in diameter, which will accommodate the catheter. The jaws

* This instrument was constructed from drawings by Mr. G. Morgavi, departmental mechanic and is now available through A. S. Aloe, New Orleans, La.

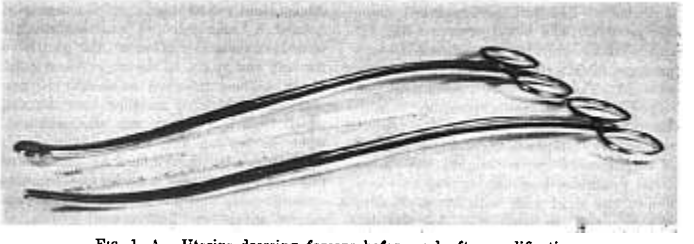

FIG. 1, A. Uterine dressing forceps before and after modification.

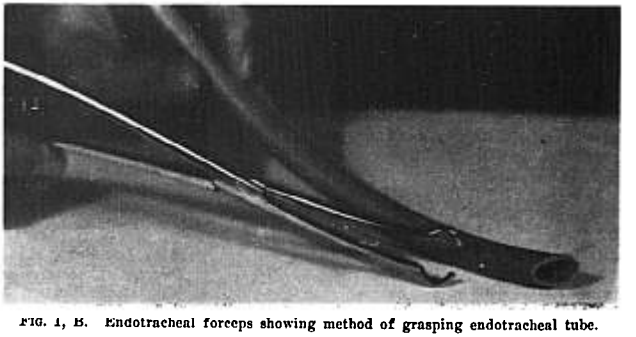

FIG. 1, B. Endotracheal forceps showing method of grasping endotracheal tube.

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thus encircle the tube so that it cannot slip off. Grasping is assured by having one blade serrated horizontally and the other longitudinally (or both blades may be crosshatched by serrations). Since the grasping end of the instrument measures 1 cm. and the proximal end measures 6 cm. when locked, a 6 to 1 mechanical advantage is offered when changing the direction of the catheter. Inasmuch as it is seldom necessary to close the instrument to the locking position, this advantage is further increased. The bluntness of the ends of the blade (4 by 2 mm.) prevents damage to pharynx and larynx. In grasping the catheter, a 2 to 1 mechanical advantage is obtained because the forceps is hinged at the junction of its distal and middle thirds. The instrument allows one to change the direction of the catheter and advance it at the same time.

With this forcepts it is possible to introduce latex-covered wire spiral tubes nasally. Likewise, it permits introduction of latex tubes orally without the use of a stilet.

G. BITTENBENDER, M.D.,
Department of Anesthesia,
Charity Hospital of Louisiana,
New Orleans, La.

MODIFICATION OF THE TUOHY NEEDLE FOR CONTINUOUS SPINAL ANESTHESIA

The following is a description of a modification of the Tuohy needle for continuous spinal anesthesia. This design was requested (1) to eliminate excessive loss of spinal fluid and (2) to induce analgesia of the cord more easily before passage of the catheter.

It has been my custom after insertion of the spinal needle to inject a small amount of anesthetic solution so that the passage of the catheter will be painless. Anesthetists who practice this procedure are well acquainted with the fact that, very often, no matter how rapidly the syringe is attached to the needle after removal of the stilet, a large amount of spinal fluid gushes out. Again, when the syringe is removed so that the catheter may be introduced into the needle, another gush of fluid occurs. A common practice is to use the thumb as a stopper which, however, is poor technic and often ineffectual in stopping the drainage of the anesthetic solution that had been injected. Surgeons who observe this technic of spinal anesthesia frequently comment on the loss of spinal fluid. Whether harmful or not, it leaves a bad impression.

The needle consists of three parts. Essentially it is the same as the Tuohy needle with the Huber point—17 gauge shaft and stilet. The modification is in the

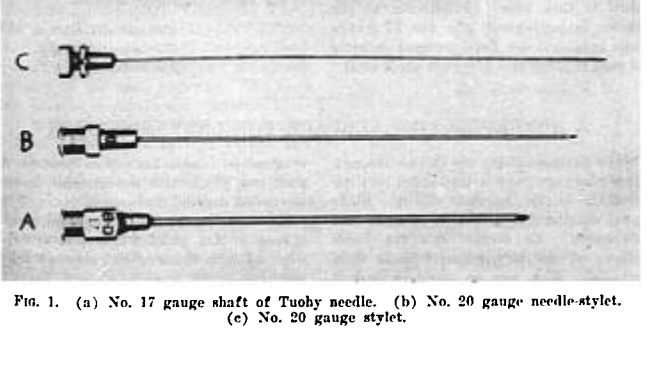

FIG. 1. (a) No. 17 gauge shaft of Tuohy needle. (b) No. 20 gauge needle-stylet. (c) No. 20 gauge stylet.

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