Tongue Blade Modification for Endotracheal Anesthesia

ALBERT R. HOWARD, M.D.*

Being dissatisfied with modifications of the Crowe-Davis Gag that have been described [1, 2, 3] I changed the gag in the following manner. (This type of modification has been used in more than 150 patients with complete satisfaction for both anesthetist and surgeon.)

The standard blade of the Crowe-Davis gag is slotted as in figure 1. Following the solder flow pattern of the insufflation side-arm which has previously been "sweated" off, produced an ideal slot.

Each slotted blade is covered by the finger of a discarded rubber glove or length of Penrose drain and may or may not be fastened with "autoclave" tape (fig. 2).

Induction is by usual means and intubation is performed with a clear plastic endotracheal tube of appropriate size to guard against aspiration. The gag is then inserted as usual and the rubber covered slot is placed directly over the midline tube before opening. Pressure of the blade against the tongue secures the tube. The rubber covering prevents a small tube from bulging through the slot with possible incarceration and inadvertent removal. In most cases it has not been necessary to move the gag between left and right tonsillectomy.

* 1219 Warwick Drive, Burlington, North Carolina.

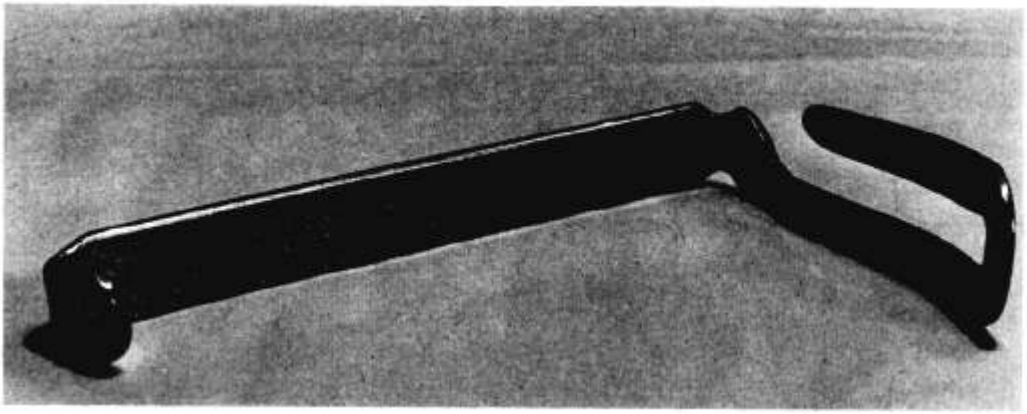

FIG. 1. Standard blade of Crowe-Davis mouth gag showing detail of slot made after removing insufflation sidearm.

FIG. 2. Blade after covering with glove finger and tape.

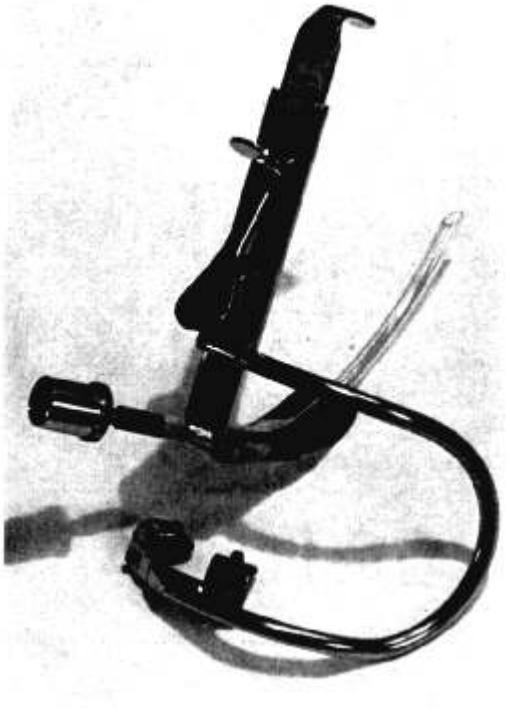

FIG. 3. Complete assembly as in use (small band of Cellophane tape securing mid-tube to blade is for demonstrative purposes only and is not used in practice).

Figure 3 shows the gag, blade, and tube assembled as in use.

The advantages of this over previously described blades [1, 2, 3] are:

(1) Modification of existing equipment by a good hospital maintenance department is possible. Expense is minimized and equipment already familiar to the surgeon is used. (In many hospitals are to be found blades previously discarded and replaced because the insufflation tube has broken off.)

(2) The "open pronged end" as "potentially a traumatic weapon" [2] is avoided.

(3) "The tube hanging up and being inadvertently removed" [2] has not been encountered.

(4) Removal of the insufflation sidearm actually gives a more unobstructed view of the working area than with unmodified blades.

(5) Use of anode tubes [1, 2] (which provide less wide assortment of sizes and are technically more difficult to insert) has not been necessary to provide an unobstructed airway.

REFERENCES

1. Rew, J. B., Wyly, A. J., and Grant, G. B.: ANESTHESIOLOGY 22: 494, 1961.
2. Barbee, W. H.: ANESTHESIOLOGY 24: 590, 1963.
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Blood Warmer

RICHARD A. KOONS, M.D.*

Methods used to warm blood have been generally rather cumbersome. Warming the bottles of blood before transfusion is slow and also wasteful if they are not used. Howland and Boyan [1] have employed a 24-foot coil of plastic tubing in the transfusion circuit. This is placed in a 20-liter water bath maintained at 37° C. and is capable of raising the temperature of blood at 4.0–5.8° C. to 30–35° C. even at transfusion rates as high as 150 ml. per minute. Because of the large size and awkwardness of maintaining the temperature of such an apparatus, a local instrument firm was asked to design such an apparatus with similar capabilities but more compact (fig. 1). The device produced has been used by the Anesthesia and Surgical Departments of Los Angeles County General Hospital for the last year. Because of the large traumatic, vascular, cardiac, and neurological services at this hospital, there are numerous occasions for massive transfusions. This blood warmer has proven to be very efficient and simple to use in all cases.

It consists of a sealed metal case containing heating elements and thermostatic controls for maximum unit temperature of 40° C. It is portable, weighing 16 lbs. and has the overall dimensions of 5 inches wide by 8½ inches deep and 10 inches high. It contains a water reservoir in which a presterilized coil of vinyl tubing is placed. The latter has an internal diameter of 0.118 inch and is 25 feet in

* Los Angeles County Hospital, Los Angeles.