CURRENT COMMENT AND CASE REPORTS

STUART C. CULLEN, M.D., *Editor*

In the past, this section has been a collection of articles and correspondence presenting useful gadgets, interesting case reports, recitations of experiences and methods for coping with practical problems. In an effort to simulate exchange of ideas relating to experience and introduction of gadgetry that occurs at luncheon tables and in smoke filled hotel rooms at meetings, this section will present in brief informal fashion the important minutiae of the specialty. We hope that elimination of necessity for submission of formal manuscripts will stimulate contributions and make this one of the livelier and more informative sections of the Journal.

Dr. Stuart C. Cullen, an Associate Editor of ANESTHESIOLOGY, has kindly consented to accept, as an added duty, the editorial responsibility for this section.

RALPH M. TOVELL, M.D., *Editor.*

SYRINGE HOLDER

There have been innumerable devices presented to hold syringes used for intermittent intravenous injections. Dr. S. N. Albert of Washington, D. C., has made a simple inexpensive holder from readily available parts. The parts include a large suction cup (1" top diameter, and 3" base), a cotter pin and a rubber mask harness. The suction cup can be one used for holding down car baggage racks.

To assemble the holder, cut out a wedge on top of the suction cup. The wedge may be of various sizes to accommodate different sized syringes. Under the wedge, a cotter pin is inserted through the top of the cup to which is fastened the rubber mask harness to secure the syringe in the wedge.

ENDOBRONCHIAL LAMPS

Doctors Robert H. Addleman and Robert E. Vore of Indianapolis have reduced the incidence of frayed tempers and broken bulbs in endoscopic equipment by using a bit of No. 8 (Fr.) catheter. The small lamps are inserted into the lumen of the short segment of catheter and then gently turned into or out of place in the carrier.

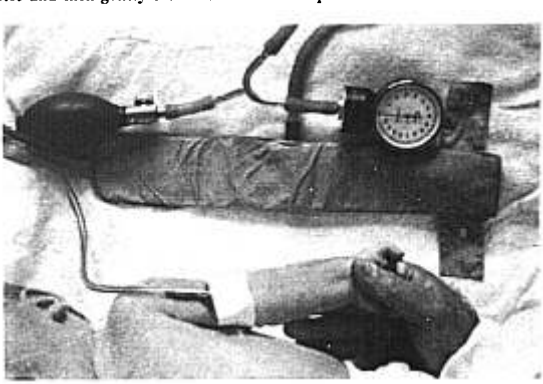


FIG. 1. Stethoscope placed over the brachial artery and strapped with adhesive.

BLOOD PRESSURE CUFF FOR INFANTS

Dr. Digby Leigh of Los Angeles recommends an infant pneumatic tourniquet manufactured by an Indiana firm. He finds that with this cuff the measurements of blood pressure in infants are reliable.

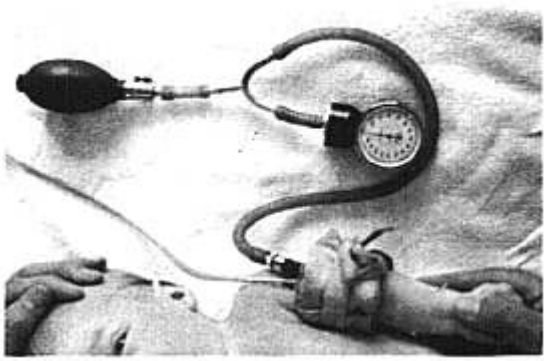


FIG. 2. Pressure cuff applied over the stethoscope.

CONDUCTIVE SHOE STRIPS

Doctors George B. Grant and Glace Bittenbender of New Orleans and Houston, Texas (Bittenbender is now Chief at Mississippi) feel that they have solved the practical

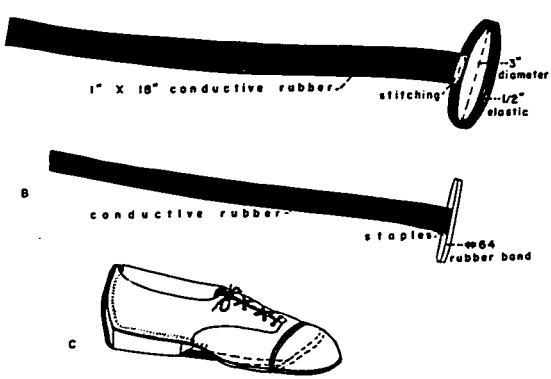


FIG. 1. A. Improvised conductive rubber shoe strip developed at Ochsner Foundation Hospital, New Orleans, Louisiana. B. Modification of Foundation Hospital conductive rubber shoe strip used at V. A. Hospital, Houston, Texas. C. Conductive strip applied to shoe.

problem of providing conductive shoes for transient personnel in the operating room by the use of homemade strips shown in the accompanying illustration.

INFANT LARYNGOSCOPE

To avoid the problems imposed by using laryngoscopes with standard sized handles in infants, Dr. Robert M. Smith of Boston devised a new handle, which is considerably smaller and more in keeping with the size of the patient. This handle is available commercially, and may be fitted with any of the standard infant blades. The over-all vertical length of the laryngoscope with blade attached is 3⅛ inches, while the comparable length of the standard laryngoscope is 6⅝ inches (fig. 1). The small handle holds two pencil batteries side by side, instead of end to end, and thus gives as strong illumination as the standard handle. The compact, flattened shape lends itself well to delicate usage and makes an instrument which is very acceptable for all infant use.

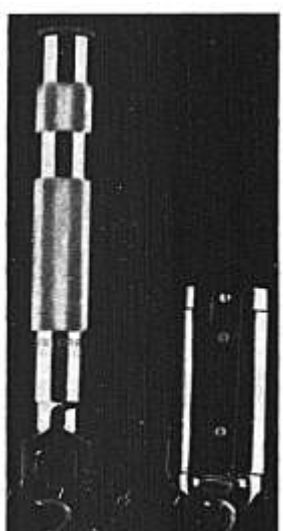


FIG. 1. Comparison of miniature and standard laryngoscope.

SANDERS ELBOW

Apparatus such as the Ayre's T-Tube, the Nonrebreathing valves, and the Slocum and Allen Cheiloplasty Elbow when used in connection with endotracheal catheters in infants, especially for head and neck operations (and particularly for cleft palate repair in infants) have limitations. These limitations include bulkiness, the possibility of undue traction on the endotracheal catheter and occasional inconvenience to aspiration. Dr. Robert E. Clark of Redwood City, California (formerly on the staff of the State University of New York), recommends that the Sanders Elbow (1) be used with the

aspirating hole open. With the nasotracheal technique, he recommends the 60 degree elbow and with the orotracheal technique the 90 degree elbow. After intubation the elbow is connected to the endotracheal catheter. To the elbow is connected the delivery tube from the machine.

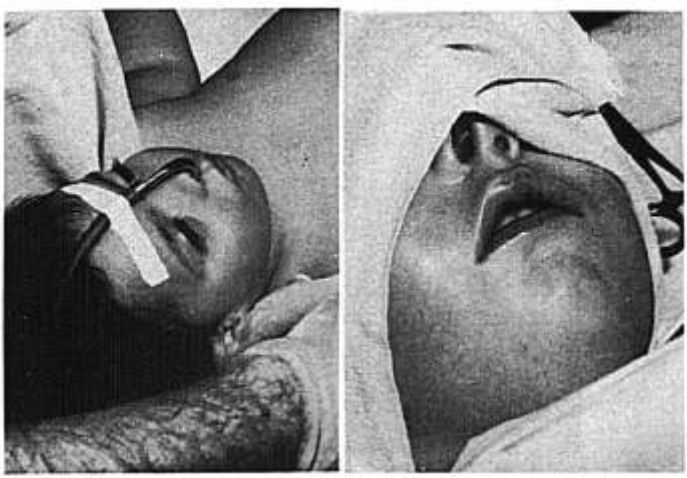


FIG. 1 A. FIG. 1 B.

FIG. 1. A. Position of apparatus for cleft palate repair before draping. Delivery tube passes out open end of head drape then toward the foot to gas machine. B. Cleft palate repair with head draped. Elliptical hole remains exposed for exhalation and for suction.

With appropriate flow rates, generally one and one-half the minute volume of the infant, anesthesia can be maintained easily without carbon dioxide retention. Artificial respiration can be effected easily by flowing 10 liters of oxygen per minute and intermittently occluding the opening in the elbow. The occlusion should last long enough to permit the chest to elevate. Aspiration of the trachea is also accomplished easily through the opening.

REFERENCE

1. Sanders, R. D.: New Endotracheal Instruments, Anesthesiology, 8: 57 (Jan.) 1947.

RECOVERY ROOM

In the accompanying photograph, Doctors Sam S. Clark, Willard D. Bennett, James R. Flautt, Jr., and Robert W. Lykins of Louisville, Kentucky, show the placement of the oxygen and suction outlets and an equipment tray on supports so that the head of the patient can be toward the center of the recovery room. They feel that with the head of the patient toward the center of the room, care of patients is facilitated.

One wonders if the authors found the movement of carts in between these supports was hampered.

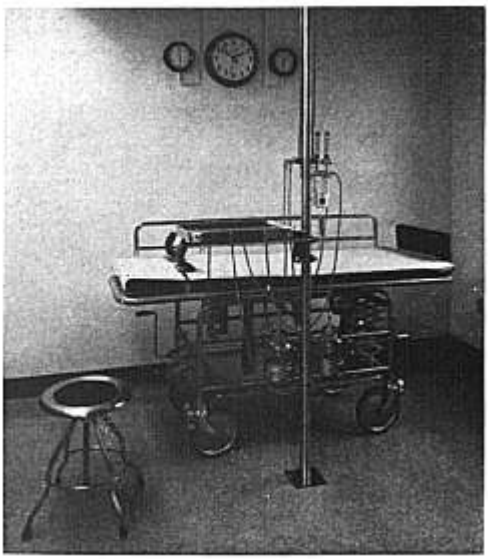


FIG. 1. View showing the Hausted recovery stretcher with attachments, and the details of the service station. Above the tray are the suction controls, and oxygen and flowmeters with humidifying bottles. Below the tray are the suction bottles.

AUTOCLAVING OF ADRENALIN

In order to diminish the opportunity for contamination during induction of spinal anesthesia, Captain Vincenzo L. Traina, presently in the 6110th USAF Hospital, and formerly of Rockford, Illinois, decided to autoclave adrenalin ampoules along with the anesthetic drug and glucose ampoules. Although he had no controls, he feels that the adrenalin was not reduced in effectiveness by autoclaving because the length of anesthesia was not shortened.

One might well expect this result because commercially prepared ampoules of adrenalin contain a preservative and, in addition, contain very little oxygen.

TRACHEOSTOMY TUBE CONNECTORS

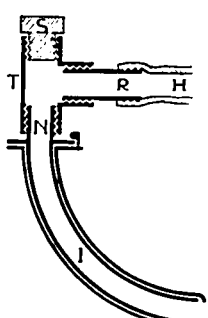
Doctors E. Trier Morch and G. A. Saxton of Chicago found that in practice none of the systems heretofore used for connecting tracheostomy tubes to respirator tubes were completely reliable. They devised connections which are described as follows.

On the inner cannula of the common Chevalier Jackson tracheostomy tube (I) a neck (N) is added, carrying a thread on the outside. Onto this neck a metal T-piece (T) can be screwed. The threads between (T) and (N) are loose enough to permit easy rotation but tight enough to prevent appreciable leakage of air. The T-piece is screwed all the way on, and then a full turn backwards, allowing a free swivel action. In this way, a change in the position of the connecting rubber hose does not twist the cannula inside the trachea.

The other arm of the T-piece is closed by a stopper (S) of nylon or metal. This stopper can be unscrewed to allow aspiration. The two arms in the T-piece are symmetrical and carry the same thread so that it does not matter which arm is connected to the tube.

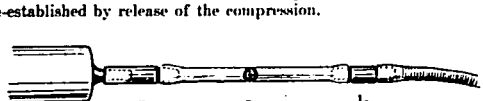
The central arm of the T-piece is connected to the rubber hose (H) from the respirator. To prevent torque in this hose from twisting the tracheostomy tube, the hose is not attached directly to the center of the T-piece, but is squeezed over a short piece of metal tubing (R). This tube is also threaded so that it can be screwed into the central part of the T-piece. It should be screwed on all the way, and then unscrewed one full turn. Rotation of the rubber hose (H) from the respirator will thus not be transmitted to the tracheostomy tube. The outside of this torque eliminating coupling (R) can be made smooth, or it can carry a thread on the outer surface in order that the rubber hose (H) from the respirator will grip it more securely.

The advantages of this connection are: (1) solid, reliable connection between the tracheostomy tube and the respirator is made, (2) aspiration of secretions is facilitated, (3) inadvertant rotation and twisting of the tracheostomy tube is eliminated, (4) the cross-sectional area at any point is not reduced, and (5) the equipment will stand repeated sterilizations, for example, boiling or autoclaving.



CUFF INFLATING VALVE

Dr. Samuel Z. Weiss of New York designed an inexpensive home made valve to facilitate the problem of inflating the cuff on endotracheal catheters. A rubber or plastic tube 1 to 2 inches long and 2 to 3 mm. in diameter is cut. This may be taken from a disposable infusion set or a disposable plastic suction catheter. Into this tube a metal ball (*a*) 2 to 3 mm. in diameter is introduced. Such a metal ball can be found in the air filter of Abbott's disposable venoclysis unit. This metal ball should fit the plastic tube tightly. Into one end of the tube a metal or plastic adaptor is fitted (*b*) (taken from the same disposable venoclysis unit). This adaptor is slipped into the soft rubber tube of the inflatable endotracheal cuff. Into the other end (*c*), a female adaptor is introduced which fits any standard syringe. The tightly fitting metal ball prevents air from escaping. If the tube surrounding the metal ball is compressed, the cross section of the tube becomes oval, and air can pass in either direction. The original tight fit is re-established by release of the compression.



In order to inflate or deflate a cuff, a syringe is attached to the valve which is fitted to the end of the cuff. The left hand holds the syringe with the third, fourth and fifth fingers and the palm, while the thumb and the second finger of the same hand compress the tube over the ball. With the right hand, the plunger of the syringe is manipulated. When the cuff is inflated, compression on the ball is released. Simple compression of the tube over the ball deflates the cuff.

FOLLOWING ARE ITEMS PERTAINING TO EXPERIENCES WITH PATIENTS

SUCCINYLCHOLINE APNOEA

In a patient in whom he felt that succinylcholine was responsible for prolonged apnoea, Dr. John Stage of Jacksonville, Florida, used a solution of potassium chloride 0.26 Gm. per 100 cc., sodium chloride 0.4 Gm. per 100 cc., and sodium lactate 0.5 Gm. per 100 cc., intravenously. He reports that respiration promptly returned. To test this response, he repeated in the same patient the same sequence of apnoea and restoration of respiration. He suggests that this solution be used by others. The rationale for use of potassium is based upon the suggestion appearing in Queries and Minor Notes of the Journal of the American Medical Association for September 25, 1954. In this note, there was speculation that the potassium in stored blood might account for reversal of apnoea induced by succinylcholine treated by transfusion.

TRACHEAL FOREIGN BODY

An experience by Doctors N. Dalton and Glace Bittenbender of Houston, Texas (Bittenbender, as mentioned before, is now in Mississippi), emphasizes the value of

FIG. 1. A. Sketch of foreign body at time of discovery, B. tomogram, showing normal laryngeal structure and foreign body, and C. foreign body after removal.