

"beading" in the tubing as the fluid level drops. Three-way stopcocks were found most suitable for this manometer since they allow positive, rapid one-hand operation.

When blood or other solutions are being administered under pressure, the manometer may be filled with saline from a separate I.V. drip and Tee-ed into the patient's I.V. line

with a three-way stopcock. This permits the anesthesiologist to switch from the pressure infusion to the venous pressure measurement with ease.

Commercially available venous pressure sets of disposable plastic also may be used to advantage with the clip-on meter stick since this allows the height of the manometer to be altered when necessary.

Universal Adapter for Endotracheal Tubes

STANLEY GROSSHANDLER, M.D., AND FRED VLAZNY, M.D.*

Everyone in the field of anesthesia has at sometime experienced the inconvenience of trying to find the right size adapter for endotracheal tubes during a busy schedule. We believe we have solved this problem with the use of two universal adapters, one for adults and one for children.

The two adapters illustrated contain a diaphragm with a hole through which the endotracheal tube is inserted. The diaphragm holds the tube with a secure and airtight fit; yet does not compromise the lumen of the tube. The high coefficient of friction of the material used in the diaphragm does not permit the tube to be pulled or forced out with ease. Tubes have been clamped off and pressures of greater than 40 mm. of mercury have been applied without the tube blowing free or air escaping. The fact that the diaphragm slips over the tube is very desirable in pediatric work. The adult adapter accommodates tubes of size 28 to 40 French while the pediatric size holds tubes 12 to 28 French.

The adult model is flexible in the middle to allow it to assume any angle without kinking. This is handy in nasal intubations, prone positions, and other unusual positions. The proxi-

mal end will fit any standard Y chimney and the whole unit weighs less than 1.5 ounces. The pediatric model is made of light weight aluminum and silicone rubber in a right angle and weighs one-half ounce.

To facilitate insertion of the endotracheal tube, bevel the proximal end and rub a small amount of lubricant on it. To suction down the tube one need only slip off the adapter and suction directly down the tube.

These two adapters have been tried in eight Milwaukee hospitals and have elicited favorable comments.



* Milwaukee, Wisconsin.