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Another (Non-vulgar) Use of the Finger

To the Editor:—Drs. Jawalekar and Santos report their method for measuring the length of a catheter in the epidural space.¹ They state this method can be used with Pharmaseal and Travenol epidural anesthesia trays. They use the 3-ml syringe provided in these trays to measure the distance of the hub of the needle from the skin.

Because the measurement of catheter length in the epidural space is accomplished using the 1-cm markings on the catheter, no ruled device, including a syringe, is needed to mark the distance of the needle hub from the skin. As a resident, I was taught to use my gloved finger in the same way Drs. Jawalekar and Santos advocate using the plunger of a 3-ml syringe. Simply note the position adjacent to the needle hub on a finger placed parallel to the needle with the finger tip against the skin of the patient.

Use of one's finger seems superior to that of the syringe plunger because 1) it cannot accidentally tele-

scope, unlike the plunger inside a syringe; 2) it is cheap and non-disposable; 3) it can be used with any epidural tray or even without one; and 4) after getting to know one's own finger through the years, it is no less accurate than using the syringe.

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An Airway Device for Ophthalmic and Head and Neck Surgery

To the Editor:—At our institution, we frequently are involved in minor ENT and ophthalmic procedures of short duration. Examples of this include ophthalmic examination of children, lacrimal duct probe and/or irrigation and removal of small lesions such as chalazions, and closed reduction of nasal fractures. The complications of tracheal intubation have been well-recognized.^{1,2} Since most patients for such procedures are outpatients, it is nice to avoid intubation if possible. However, difficulty arises due to the close proximity of the airway and the surgical field.

In the past, we have dealt with these cases in one of two ways. Frequently, the anesthesia was delivered via mask with the anesthetist sitting to the side of the table. This created problems because the mask was a hindrance to the surgeon, the airway maintenance was difficult and strenuous for the anesthetist, and a continuous territorial battle occurred between the surgeon and anesthetist. An alternative was to proceed with an inhalation induction then maintain anesthesia with insufflation via an oral airway with a small catheter through the airway into the pharynx. This allowed the anesthe-

tist to maintain the airway without disturbing the surgeon; however, this required high concentrations and high flows of anesthetics which polluted the operating room atmosphere. An additional problem with this technique was the inability to deliver positive-pressure ventilation.

Recently, we constructed a simple airway apparatus which eliminated the problems of the previously mentioned techniques. It was made by glueing an oral airway to a standard right angle connector.

A clear, plastic, oral mask was made by cutting out an appropriately curved and sized section from a vinyl face tent (Hudson Oxygen Therapy Sales Company, Wadsworth, Ohio). A hole was made in the middle of the cut section of the plastic mask and it was then fitted over the oral airway to rest against the phlange (fig. 1).

This apparatus has multiple advantages. The airway can be maintained from below avoiding conflict with the surgeon. The oral mask allows a tight seal around the mouth. When this is combined with obstruction of the nasal passages, a closed system can be achieved. The nose can be clamped using any simple device such as

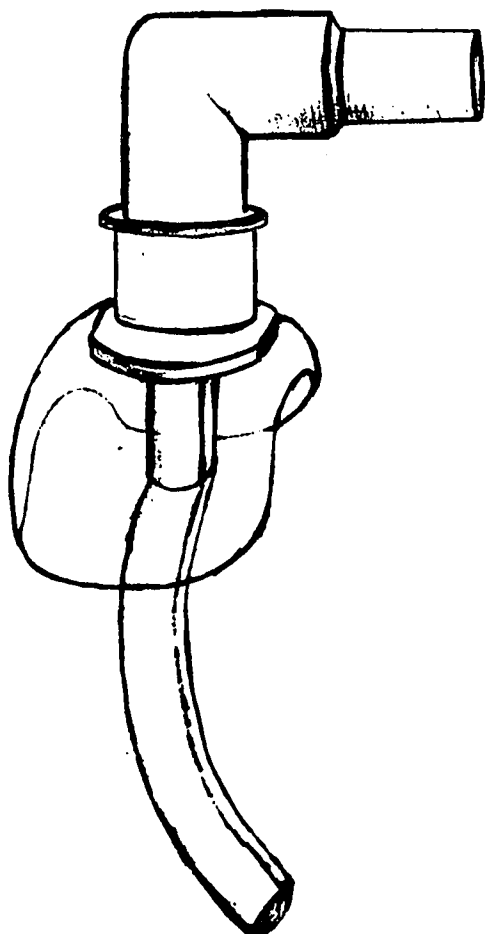


FIG. 1. Airway apparatus constructed from right angle connector, oral airway, and clear plastic mask material.

that used by respiratory therapists. We also have found that a simple clamp can be made from the thin metal strip at the bridge of the nose in disposable operating room masks. With the attachment of the right angle connector to a Bain or circle system, positive-pressure ventilation can be performed and anesthetic gases can be evacuated with a scavenger system. We find the Bain system most applicable because most of our patients are children, and also because the single tube is light in weight and yields a "streamlined" system (fig. 2).

In the past 12 months, in excess of 100 cases have been done with this device without complications. The patients' ages ranged from several weeks old to 66 years of age. The duration of anesthesia ranged from 10 to 90 minutes. Neither airway obstruction nor abdominal distention were experienced. Surgeon acceptance has been excellent.

Here we report our experience with this prototype airway device. We have found that a more firm fitting mask section can be molded from 0.150-inch dental mouthguard material (Pennwalt Company, Philadelphia, Pennsylvania). We believe that with some further

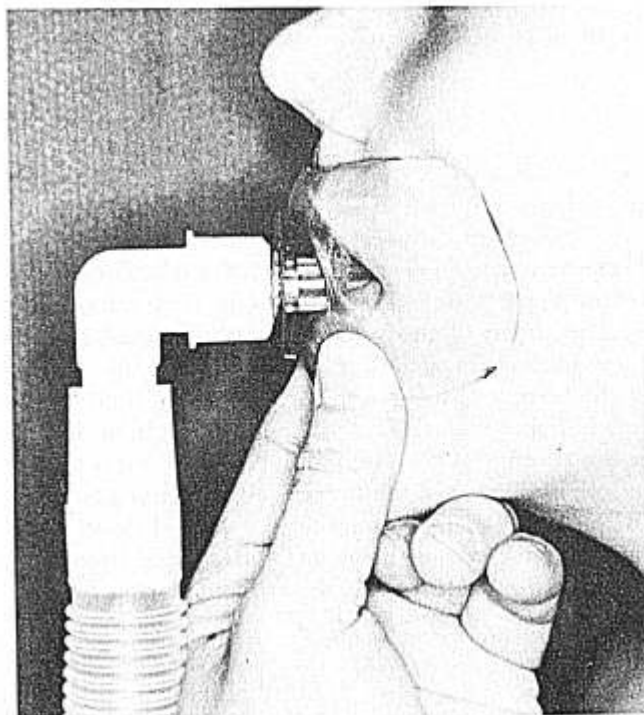


FIG. 2. Airway in place and connected to Bain System. Head extension and mask seal are maintained from below allowing free access to surgical field.

refinement, such as a swivel mechanism, so that the right angle connector can rotate on the airway phlange, this apparatus could be of value for routine mask cases and CPR. Our plan is to further improve our airway and investigate these possibilities.

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