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A Simpler Method of Nasogastric Tube Insertion

To the Editor:—Recently, two letters concerned with inserting nasogastric (N-G) tubes appeared in ANESTHESIOLOGY. In 1979, Ohn and Wu described a method using a modified esophageal stethoscope to hold the tip of a N-G tube to push through the resistive area of the upper esophagus.[1] In 1980, Sprague and Carter proposed a method using a split endotracheal tube which encases a N-G tube as a guide for proper placement.[2] We use a method which is simpler than both of these methods, because there is no need to prepare a special device.

A N-G tube is inserted through the nose into the pharynx. The tip of the N-G tube is then drawn out of the mouth and threaded through the side hole of an endotracheal tube (either size #7 or #7.5). Both tubes should be well-lubricated and are held side by side between the fingers of the right hand (fig. 1). The operator then places the gloved index finger of the left hand into the patient's mouth for guidance in inserting the tubes with the right hand. Once the tubes pass through the resistive area, the index finger holds the N-G tube by pushing it against the wall of the pharynx, while the right hand continues to push the endotracheal tube further down 1 or 2 cm. The operator will easily feel the tip of the N-G tube dislocating from the hole of the endotracheal tube which is then removed; thereafter the N-G tube may be pushed further into the stomach.

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FIG. 1. Position of both tubes held in the right hand.

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The Ts of Endotracheal Intubation

To the Editor:—With a combined total of over 50 years of instructing anesthesia and otolaryngology residents in laryngoscopy and endotracheal intubation, we have found the check-list of words beginning with "T" to be useful in evaluating difficult intubation.

1. Teeth: Is any dentition loose, missing, or false?
2. Tongue: Is there macroglossia as with amyloidosis or a hematoma or abscess of the tongue?
3. Tempero-Mandibular Joint: Does ankylosis or trismus prevent the mouth from opening fully?

4. Tonsils: Does tonsillar-adenoid hypertrophy cause any potential mechanical problems?
5. Torticollis: Is there any restriction of neck motion which prevents adequate flexion or extension of the neck? Is there a thick, bull neck?
6. Thyroid notch: Is the distance from the mandibular symphysis to the thyroid notch at least three finger breaths? Is micrognathia with an anterior larynx present?
7. Trachea: Is the trachea midline or deviated as in some cases of goiter?
8. Tumor: Is a laryngeal or pharyngeal tumor or polyp present which could cause difficulties?

For nasotracheal intubation, we add the following "Ts":

9. Turbinates: Are the turbinates hypertrophied or congested causing a mechanical problem? Is septal deviation present?
10. Tubercle Phargneus: Is the anterior tubercle of the first cervical vertebra enlarged impeding passage of the nasotracheal tube? Is a concomitant Passavant's Ridge present which could lead to submucosal burrowing of the tube?

We have found these guidelines useful in determining whether endotracheal intubation should be done under standard techniques or by specialized methods under awake, topical anesthesia, with or without fiber optics. The final "T" is for occasional tracheostomy.

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More Information about Pipecurium, a New Neuromuscular Blocking Agent

To the Editor:—In the editorial by Savarese[1] concerned with neuromuscular blocking agents, pipecurium is described as a long-acting pancuronium analogue which fits the description of drug "C", and has a duration of action of 45–60 minutes.

This statement is based on data from the article by Alánt *et al.*[2] Unfortunately, this study had several deficiencies: 1) it was not a controlled study; 2) the doses of pipecurium that were administered were similar to the doses of pancuronium they used routinely; and 3) the evaluation was based on clinical observation without using a peripheral nerve stimulator.

In a recent controlled clinical pharmacologic study,* it was found that in two groups of patients using pipecurium (n = 18) or pancuronium (n = 20) during balanced anesthesia, pipecurium on a weight basis was about 20% more potent than pancuronium. The 95% blocking doses were 0.059 mg/kg for pipecurium and 0.075 mg/kg for pancuronium, respectively. These doses provided equal intubating conditions and relaxation. Using the methods and evaluating the neuromuscular parameters as described in similar studies,[3] the onset, duration, recovery time, and reversibility of the residual neuromuscular block by neostigmine of the two agents given in equipotent doses were similar. The duration of action (clinical relaxation time) of pipecurium was 42.7 ± 5.6 min (mean ± SE), and for pancuronium, 44.1 ± 4.1 min, respectively. It was found that for all of the relevant neuromuscular variables studied, the differences were not significant between the two groups. No cardiovascular or other side effects were observed with the use of pipecurium.

In conclusion, pipecurium is a more potent pancuronium analogue but with similar neuromuscular actions. The difference is that pipecurium does not cause tachycardia as does pancuronium.

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