

Anesthesiology  
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## A Modified Tubular Pharyngolaryngoscope for Difficult Pediatric Laryngoscopy

*To the Editor:*—A modified two-piece tubular pharyngolaryngoscope is now available from Pilling Instruments\* for pediatric use. The tubular laryngoscope can be used to create a sufficient field of view within the laryngopharynx by compressing surrounding edematous mucosa, masses, or scar tissue.<sup>1</sup> The standard nontubular laryngoscope blade is unable to create sufficient viewing space under circumstances of circumoral edema or scarring, since mucosa or scar tissue typically envelops and thereby obliterates both the viewing space and the light source of the standard open-sided laryngoscope blade.<sup>1</sup> In addition, tubular laryngoscopes provide for an intraluminal light source unobstructed by surrounding edematous mucosa, blood or secretions, intraoral masses, or scar tissue. The two-piece tubular pediatric laryngoscope may be used for difficult pediatric tracheal intubation, particularly in cases in which flexible fiberoptic laryngoscopy is impossible because of small endotracheal tube sizes or due to oral pathology.

Figure 1 shows the two handle-blades and knurled screw to hold the handle-blades of the tubular laryngoscope together during orotracheal intubation. An orotracheal tube is placed intraluminally through the tubular laryngoscope blade and into the glottis during direct suspension laryngoscopy with cold fiberoptic illumination. Figure 2 recreates the intraluminal insertion of an endotracheal tube through the tubular laryngoscope blade and into the trachea with bright illumination provided by dual intraluminal fiberoptic light sources inserted into each blade.

We have used the two-piece tubular pediatric laryngoscope for endotracheal intubation in patients with acquired pediatric microstomia and intraoral cystic hygroma. Microstomia may be congenital, as in the whistling face syndrome<sup>2</sup> and complete mandibular agenesis,<sup>3</sup> but it is more commonly acquired after thermal injury<sup>4</sup> or caustic lye ingestion.<sup>5</sup>

Minor disadvantages of tubular laryngoscopy for tracheal intubation in children include a temporarily obstructed view of the patient's larynx and glottis as the endotracheal tube is advanced into the trachea, and difficulty in stabilizing an endotracheal tube as the two pieces of the tubular laryngoscope are dismantled for removal.<sup>1</sup> In addition, the

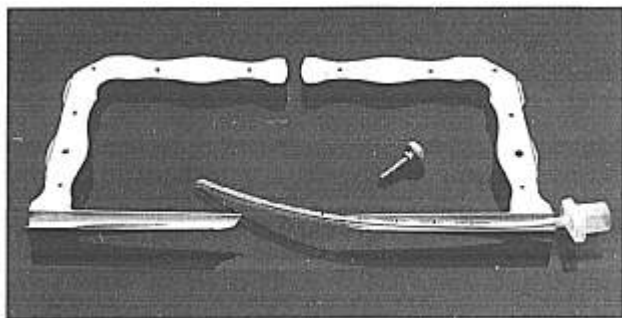


FIG. 1. The two handle-blades and the knurled screw to hold the handle-blades of the pediatric tubular laryngoscope together during orotracheal intubation.

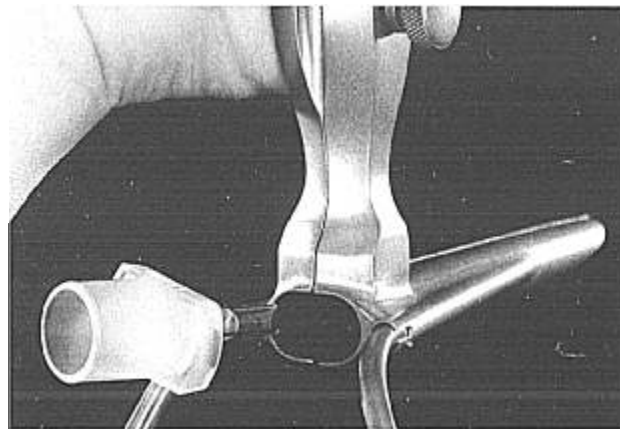


FIG. 2. *In vitro* recreation of the intraluminal insertion of an endotracheal tube through the tubular laryngoscope blades and into the trachea with bright illumination provided by dual fiberoptic light sources in each blade.

two-piece tubular laryngoscope requires an external fiberoptic light source.

In summary, the advantages of the two-piece tubular laryngoscope in difficult pediatric tracheal intubation include an intraluminal light source that cannot be obliterated by edema or secretions, and the unique ability to create viewing space within the laryngopharynx by gently compressing surrounding edema, masses, or scar tissues. The pediatric tubular laryngoscope also may offer unique advantages in cases of failed flexible fiberoptic intubation. In such cases, a tubular laryngoscope will exclude blood, secretions, and edema from both its viewing space and its source of illumination.

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\* Model no. 52-2220, Modified Pilling Instruments, 420 Delaware Drive, P. O. Box 7514, Fort Washington, PA 19034

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### A Warning in the Use of Pulse Oximeters: I

*To the Editor:*—As a result of the Case Report by Murphy *et al.*,<sup>1</sup> Physio-Control Corporation issued a Safety Alert on April 16, 1990 to notify all Lifestat<sup>®</sup> 1600 pulse oximeter customers of this potential hazard. The notification explains the particular hazard associated with Ohmeda pulse oximeters are used with Physio-Control sensors. It explicitly recommends that the sensors be used only with Physio-Control pulse oximeters. Physio-Control also is providing these customers with warning labels for attachment to the sensor cables. In addition, all new sensors will be packaged with this warning label.

Readers needing additional information or labels from Physio-Control may contact Technical Support at 1-800-426-8047 ext. 5002 (6:00 A.M. to 4:30 P.M. Pacific Time).

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#### REFERENCE

1. Murphy KG, Secunda JA, Rockoff MA: Severe burns from a pulse oximeter. *ANESTHESIOLOGY* 73: - , 1990

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### A Warning in the Use of Pulse Oximeters: II

*To the Editor:*—The Case Report by Murphy *et al.*<sup>1</sup> will augment Ohmeda's efforts to reach the public with the message that probes from different manufacturers should not be used with Ohmeda pulse oximeters.

Instructions for use of Ohmeda oximetry monitors have always contained precautions against using probes from other manufacturers. Although the Ohmeda 3700 pulse oximeter by itself poses no hazard when used as directed in the operation and maintenance manual, Ohmeda has developed a Safety Alert emphasizing the need to segregate Ohmeda oximetry equipment from probes manufactured by Physio-Control. Each customer will be sent a supply of warning labels to be placed on the equipment. We also have modified our user's manual to warn against combining Ohmeda equipment with equipment from other manufacturers. The Safety Alert has been sent to all of our customers of record. This mailing is expected to go out to all customers approximately May 1, 1990.

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Readers wishing to obtain warning labels to place on Ohmeda pulse oximeters (affects models 3700, 3710, and 3740) may call the Customer Support Department at 1-800-652-2469. The warning labels will be supplied free of charge upon request.

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#### REFERENCE

1. Murphy KG, Secunda JA, Rockoff MA: Severe burns from a pulse oximeter. *ANESTHESIOLOGY* 73: - , 1990

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### A Warning in the Use of Pulse Oximeters: III

*To the Editor:*—Murphy *et al.*<sup>1</sup> have called attention to an important safety principle of medical technology—namely, that equipment should always be used according to the manufacturer's instructions. However, mistakes happen. In an ideal world, medical equipment would be de-

signed so that innocent errors would be harmless. In such a world, sensors and oximeters that were not designed to work safely together would be physically incompatible. Unfortunately, there simply are not enough unique connector configurations available to ensure this design