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An Unusual Difficulty in Fiberoptic Intubation

To the Editor:—Recently we encountered a difficult problem with fiberoptic endoscopic tracheal intubation. A 12-year-old girl with craniofacial dysostosis presented for surgery. Because of the patient's small receding mandible and limited ability to open her mouth, a difficult tracheal intubation was anticipated. After sedating her with 5 mg diazepam and 100 mg thiopental intravenously, the nasal passages were sprayed with 4% cocaine and a transtracheal block with 3 ml of 4% lidocaine was performed. A 6.5-mm internal diameter tracheal tube was placed through the left nostril into the nasopharynx. A 3.5-mm fiberoptic bronchoscope was advanced through the tracheal tube into the trachea after visualization of the glottis. The tracheal tube was then advanced over the endoscope. As the endoscope was still in the trachea, we assumed that the tracheal tube was in the trachea and removed the endoscope. We had moderate difficulty in withdrawing the endoscope. When the endoscope was removed the patient could phonate, and the tracheal tube was found to be in the esophagus. We repeated the procedure two times with the same results and concluded that, although the endoscope was in the trachea, the tracheal tube was advancing posteriorly into the esophagus. As the tracheal tube was advanced into the esophagus, the endoscope was being bent and the curve was advanced into the esophagus, even though the tip of the endoscope still was in the trachea (fig. 1). Successful tracheal intubation was performed by elevating the patient's head and applying gentle downward pressure on the larynx, and the endoscope was withdrawn with ease.

During fiberoptic endoscopic intubation, the relationship of the nasopharyngeal axis to the laryngeal axis is critical for advancement of the tracheal tube over the endoscope. Because of the great flexibility of the thinner 3.5-mm endoscope, an esophageal intubation with bending of the endoscope is easily done, even though the tip of the endoscope remains in the trachea. An important clue to this problem is difficulty in removing the endoscope from the tracheal tube. This difficulty should alert the endoscopist to the possibility of an abnormal align-

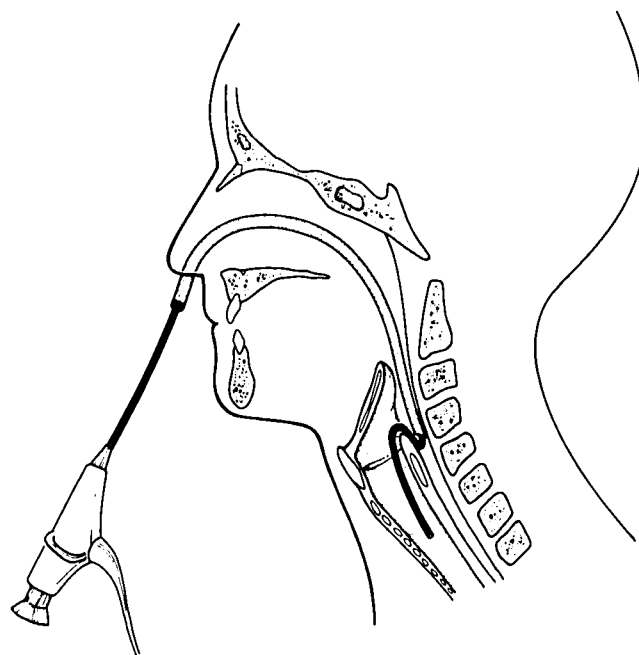


FIG. 1. The nasotracheal tube advancing into the esophagus in a posterior plane, bending the fiberoptic endoscope and pushing the endoscope into the esophagus. The tip of the fiberoptic endoscope is still in the trachea.

ment of the airway axes. If resistance to withdrawal of the endoscope is encountered, the endoscope and the tracheal tube should be removed as a single unit in order to prevent breakage of the fiberoptic bundles. This problem may not be encountered with a larger and more rigid fiberoptic endoscope or with orotracheal endoscopic intubation.

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