

Correspondence

Anesthesiology
48:152, 1978

Modified Endobronchial Tube

To the Editor:—The well-known difficulty of ventilation of the lungs in the presence of a large bronchial fistula and the anesthetic problems presented by constrictive pericarditis led us to devise a modification of the White* double-lumen endobronchial tube for use in a patient who had both diseases. The patient, a 64-year-old man, had severe constrictive tuberculous pericarditis (with a central venous pressure of 30 cm H₂O), bilateral pleural effusions, severe bilateral pneumonia, and a bronchoesophageal fistula approximately 8 mm in diameter near the origin of the right upper lobe bronchus. Administration of oxygen, 50 per cent, by face mask was necessary to maintain an arterial blood oxygen tension above 50 torr with an arterial carbon dioxide tension of 34 torr. The patient was alert and responsive although tachypneic and weak. He was scheduled for ligation of the gastroesophageal junction, gastrostomy, and diverting cervical esophagostomy, as it was thought that these procedures would stress the patient as little as possible and offer a chance for his pulmonary condition to improve, permitting correction of the fistula and pericarditis in the future. Our experience with the unmodified White tube has been that it often fails to form a good seal in the right bronchus, and we believed that it would be unlikely to occlude the fistula. We thought that the benefit to respiration of fistula occlusion would outweigh the loss of ventilation of the right upper lobe. Therefore, we modified a White tube by affixing a soft cuff with a pilot balloon over the right bronchial cuff of the tube, securing the inflation tubing of the soft cuff to the proximal end of the tube by means of a 2-0 silk ligature.

* Rusch, Inc.

Anesthesiology
48:152-153, 1978

To the Editor:—The so-called low-pressure "fail-safe" oxygen system has in the past decade become standard equipment for anesthesia machines. Even the Joint Commission on Accreditation of Hospitals' surveys include checking this item. It is our contention,

Address reprint requests to Dr. Levin: Department of Anesthesiology, Veterans Administration, Edward Hines, Jr., Hospital, Hines, Illinois 60141.

After placement of a radial-artery catheter to monitor blood pressure, anesthesia was slowly induced with diazepam, 10 mg, and morphine sulfate, 3 mg, while having the patient breathe oxygen with enflurane, 0.5 per cent. In his debilitated condition, this technique permitted laryngoscopy, laryngotracheal anesthesia with 4 per cent lidocaine, and insertion of the modified White tube without abolishing spontaneous ventilation. The tracheal and bronchial cuffs were inflated and the tube was checked for correct position by briefly occluding the ventilation to each lung. The patient continued spontaneous ventilation, and as cardiac status permitted, respiration was assisted without clinical evidence of a leak through the bronchial fistula. Arterial blood-gas values were satisfactory throughout the surgical procedure. Anesthesia was maintained with nitrous oxide-oxygen, 50 per cent each. At the termination of operation, with the patient still breathing spontaneously, the trachea was extubated. His ventilatory pattern and arterial blood-gas values returned to their preoperative condition. We found this modified endobronchial tube extremely helpful in the anesthetic management of a patient with an unusual combination of diseases.

MARK G. ZUKAITIS, M.D.
Resident in Anesthesiology

LYNDA S. KOEHLER, M.D.
Assistant Professor of Anesthesiology

*Department of Anesthesiology
School of Medicine
The University of North Carolina at Chapel Hill
Chapel Hill, North Carolina 27514*

(Accepted for publication September 19, 1977.)

"Fail Safe"? Unsafe!

however, that this system as presently utilized in most institutions does not constitute a significant safety factor. In a majority of hospitals, the oxygen source to the anesthesia apparatus comes from piped oxygen. The "fail-safe" apparatus does not function so long as the line pressure is maintained even in the absence of any flow through the flowmeter. This is also true in situations where cylinders are used.

In a personal communication, Dr. L. Rendell-Baker