

CORRESPONDENCE

Anesthesiology
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To enhance the timeliness of publication of Letters to the Editor, the Editorial Board approves the changes whereby pre-publication proofs of Letters accepted for publication will no longer be available. Additional guidelines regarding Letters to the Editor can be found in the Guide for Authors.

Tip of Polyvinyl Chloride Double-lumen Endotracheal Tube Inadvertently Wedged in Left Lower Lobe Bronchus

To the Editor:—Brodsky *et al.*¹ recently described obstruction of the left upper lobe (LUL) bronchus using a 37 French left-sided polyvinylchloride (PVC) double-lumen endotracheal tube. They stated that the probable cause was the blocking of the LUL bronchus with the endobronchial cuff.

We had a related experience using a 41 French left-sided PVC double-lumen endotracheal tube, resulting in a brief period of hypoxemia ($Pa_{O_2} = 38$ mmHg on 100% oxygen) following the onset of one-lung anesthesia during right thoracotomy. We were able to show in our case that the mechanism was the inadvertent wedging of the double-lumen tube's tip in the left lower lobe (LLL) bronchus, which caused significantly decreased flow to the LUL. Our procedure was as follows. We first deflated the bronchial cuff, but noted no air leak from the open tracheal lumen. This suggested to us that the tip was wedged in a bronchus. We then deflated the tracheal cuff, withdrew the double-lumen tube about a centimeter, and reinflated it. The expected air leak became clearly evident. Re-inflation of the bronchial cuff led to louder breath sounds over the LUL and to rapid correction of the hypoxemia.

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We agree with Brodsky *et al.* that both the upper and lower lung fields should be auscultated when a double-lumen endotracheal tube is placed. If the LUL has diminished breath sounds owing to either the wedging of the tip in the LLL bronchus or the obstructing of the LUL bronchus with the cuff, then withdrawing the endotracheal tube 1 or 2 cm should cure the problem.

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REFERENCE

1. Brodsky JE, Shulman MS, Mark JBD: Malposition of left-sided double-lumen endotracheal tubes. *ANESTHESIOLOGY* 62:233, 1985

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Anesthesia and Monitoring for Pediatric Radiation Therapy

To the Editor:—Anesthetic problems during radiation therapy for children have been addressed, but no standard protocol has been developed.^{1,2} In response to a difficult case, we developed a protocol including ketamine anesthesia and pulse oximetry that has proven most satisfactory.

A combative, 25-kg, 6-yr-old boy required 23 cranial radiation therapy treatments over a month's time. He had undergone craniotomy for medulloblastoma 6 weeks previously and had a functioning ventriculoperitoneal shunt in place. Each radiation treatment required the patient to be sequestered, prone, and motionless beneath a linear accelerator for 10 to 20 min. Because of the patient's mental status, intravenous cannulae rarely remained in place for more than a few h after each treatment and had to be restarted daily. Pretreatment medication consisted of dexamethasone plus a nonparticulate antacid (Bicitra®). On arrival to the radiation therapy department, we ad-

ministered ketamine, 4 mg/kg im, which produced excellent conditions for cannulae and monitor placement. The latter consisted of continuous ECG monitoring (Datascop 2000®), a pulse oximeter (Nellcor®), and automatic, noninvasive blood pressure monitoring (Sentron®, Bard Biomedical). The initial dose of ketamine also allowed the radiation therapists to position the patient face down with his head immobilized on a custom-made headrest.

Two closed-circuit television cameras provided visual monitoring. One camera was directed to the linear accelerator gantry to confirm that the patient remained immobile during treatment. The other camera focused on the adjacent pulse oximeter and noninvasive blood pressure monitor. A microphone transmitted the audible ECG signal and the saturation-dictated pitch of the oximeter signal.

After the patient was positioned and monitors were