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Safety of Anesthesia for Patients with Anterior Mediastinal Masses: I.

To the Editor:—We read with interest the recent presentation by Ferrari and Bedford[1] of their large series of patients with anterior mediastinal masses. The care provided these patients at Sloan-Kettering Cancer Center is laudable in that 44 high-risk patients underwent general anesthesia without a single death or permanent injury. However, we believe that a rate of life-threatening complications of 20%, does not substantiate the conclusion "that the benefits of obtaining an accurate tissue diagnosis and initiating an appropriate therapeutic regimen outweigh the possible risks inherent in anesthetizing children with anterior mediastinal masses."

This statement may be apropos in an institution where care of such high-risk patients is not uncommon. But if a complication rate of 20% occurs in an institution where skills are polished because of regular application, to what level would morbidity and mortality increase if anesthesiologists who care for these high-risk patients only infrequently began to assume their care?

We heartily agree with Ferrari's and Bedford's belief that "the ability to rapidly alter both the patient's position and the anesthetic technique are the most important factors in preventing anesthetic complications whenever this high-risk situation is encountered." In this regard, we have used a technique that has allowed us to obtain diagnostic tissue specimens that directed appropriate therapy without submitting the patient to the risks of general endotracheal anesthesia.

Recently, we were consulted regarding the management of a 13-yr-old boy with a large anterior mediastinal mass who refused local anesthesia for diagnostic biopsies. Because previous reports in the anesthesia literature verify that these patients are at increased risk for either cardiac or pulmonary catastrophe when they undergo induction of general anesthesia,[2–9] we used intravenous ketamine, local infiltration anesthesia, and supplemental nitrous oxide/oxygen in a 50% mixture for the scheduled biopsies.

Preoperatively, the child received intravenous glycopyrrolate (0.2 mg) and diazepan (2.5 mg). During the procedure, with the patient in reverse Trendelenburg (15–20°), intravenous ketamine was titrated (2 mg/kg total dose) to maintain spontaneous ventilation and to provide adequate sedation and analgesia for excision of a left supraclavicular lymph node and right anterior iliac crest bone marrow biopsy. The patient quietly maintained spontaneous ventilation while pulse oximetry confirmed excellent oxygenation; hemodynamic parameters remained stable throughout the procedure. His postoperative recovery was unremarkable.

In this scenario, knowledge of the anesthetic concerns unique to this high-risk population remains paramount, as does the necessity of taking precautions to handle potential complications. Likewise, the capability to rapidly change the anesthetic technique if airway or cardiac compromise occurs must be readily available. However, alternatives are implemented only if the need to secure the airway becomes unavoidable. If ketamine is titrated judiciously and spontaneous ventilation is maintained, accurate tissue diagnoses can be made in these high-risk patients without subjecting them to the risks of general endotracheal anesthesia.

THOMAS D. TINKER, M.D.
Assistant Professor

DAVID L. CRANE, M.D.
Associate Professor
Chief of Pediatric Anesthesiology

Department of Anesthesiology
The University of Oklahoma Health Science Center
P. O. Box 26901
Oklahoma City, Oklahoma 73190

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