

Foreign Body Removal – Relax!

To the Editor:

In the December issue, AuBuchon *et al.* from the Washington University School of Medicine in an Images in Clinical Medicine presentation of a high tracheal foreign body noted that “First, spontaneous ventilation is recommended.”¹ This same assertion is made again later in that issue in a paper from the same institution describing pediatric perioperative scenarios for use in simulation where “maintenance of spontaneous ventilation” was considered the correct response for a scenario of airway foreign body.² These two would make it seem that this is a clear requirement for caring for these children. Would any of the authors care to address several papers that have shown no advantage to spontaneous ventilation (and with a significant incidence of conversion to controlled ventilation) in a review of 94 patients;³ that concluded there was no advantage to the avoidance of muscle relaxants in a series of 287 cases (inactivity with inhalational agent and muscle relaxant was “imperative”);⁴ that found there were more problems with spontaneous ventilation than controlled ventilation with the use of muscle relaxants in a series of 384 patients;⁵ or that concluded in a literature review of almost 13,000 patients that there is no apparent reason to avoid muscle relaxants?⁶

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(Accepted for publication March 8, 2012.)

In Reply:

Thank you for identifying the controversy about the role of spontaneous ventilation and neuromuscular blockade. The management of airway foreign bodies and use of neuromus-

cular blockade should be individualized based on factors such as the location and type of foreign body.¹ The image of a sunflower seed wedged at the cricoid ring reinforces the anesthetic management principle of maintaining spontaneous ventilation and avoiding neuromuscular blockade.²

In this child, neuromuscular blockade and positive pressure ventilation could displace the larger proximal portion of this sunflower seed further into the airway and convert this partial airway obstruction into complete airway obstruction.^{1,3} Spontaneous ventilation remains the preferred method when a foreign body is at the level of the glottis and cricoid ring.^{1,3}

A glottic or subglottic location for a foreign body is often associated with complete airway obstruction in the prehospital and emergency department setting. The majority of children who survive the initial aspiration of nuts or seeds usually require bronchoscopy for a foreign body lodged in a tracheal or bronchial location. In these children, as the literature and Baum's letter suggest, neuromuscular blockade and positive pressure ventilation is an option that offers the benefit of a “quiet” airway. The use of neuromuscular blockade facilitates the bronchoscopic removal and prevents the coughing and breath-holding that frequently accompany rigid bronchoscopy, particularly when foreign bodies are distal to the carina.¹ The glottic location is less common in the child who presents to the operating room for foreign body removal, and we believe the image reinforces the wisdom of maintaining spontaneous ventilation during anesthesia induction.

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(Accepted for publication March 8, 2012.)

Is Simulation the Best Way to Assess Pediatric Anesthesia Skills?

To the Editor:

We would like to commend Fehr *et al.* for their article that addresses simulation-based assessment for pediatric anesthesia skills.¹ We agree that a multiple scenario-based education and assessment of skills required to manage a pediatric anesthesia crisis are helpful in educating anesthesia residents.