Subglottic Airway Foreign Body

A Near Miss

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This image was obtained during a direct laryngoscopy of a 4-yr-old boy. He experienced a choking episode after a witnessed aspiration of a sunflower seed. The seed is lodged at the level of the cricoid. On arrival in the emergency department, the patient was alert with an oxygen saturation of 96%, tachypneic with inspiratory stridor, nasal flaring, subcostal retractions, and accessory muscle use.

In the operating room, an induction of midazolam and ketamine was followed by sevoflurane inhalation and maintenance. After an adequate depth of anesthesia was achieved, direct laryngoscopy and rigid bronchoscopy was performed with removal of the sunflower seed. Spontaneous ventilation was maintained throughout the procedure. The child continued to have mild stridor in the postanesthesia care unit, but responded to a single postoperative dose of racemic epinephrine. He was discharged home less than 24 h later.

This image indicates how a foreign body can potentially result in complete airway obstruction. The seed traversed the more distensible glottis and lodged at the rigid cricoid ring. The image indicates the potential for complete airway obstruction leading to asphyxia. The subglottic location reinforces two management principles related to airway foreign bodies in children. First, spontaneous ventilation is recommended to prevent the seed from completely obstructing the airway at the level of the cricoid. The second, an observation from the American Heart Association (Dallas, TX), because of the cricoid location of foreign bodies in children, a cricothyrotomy may not relieve complete airway obstruction unless the catheter is passed beyond the foreign body. In the United States alone, approximately 150 children die each year because of foreign body aspiration.

References