

[NM-339] Managing Pediatric Foreign Body in an Emergent Airway

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A healthy 6 year-old male presented to outside hospital after an unwitnessed incident at home which resulted in a wire hanger lodged in his oropharynx. He was airlifted to our hospital and received by anesthesia and ENT teams. Patient was stable but anxious and drooling; he had no stridor, wheezing or cyanosis.

He received midazolam 2mg and glycopyrrulate 0.2mg and transported to the OR with O2 NC and ASA monitors. He was induced with ketamine in 5 mg increments, 25mg total. ENT performed direct laryngoscopy and visualized object in left oropharynx; no overt bleeding nor evidence of trauma to the glottis was seen, but moderate edema was present. Lidocaine 4% was sprayed into the glottis. ENT's first attempt at intubation failed using Hopkins Rod Telescope with an ETT loaded onto it. Patient became stridorous and received midazolam 1mg and ketamine 10mg to deepen anesthesia. Second attempt was successful; 5.0 cuffed ETT was deployed and secured.

Patient was transported to CT scan to assess vascular involvement. He was maintained on propofol (200 mcg/kg/min) during transport and sevoflurane 2.5% in oxygen during imaging. A neuroradiologist confirmed no vascular compromise. In the OR, ENT removed the hanger. Minimal bleeding was present, no further intervention needed. Clindamycin 125mg and dexamethasone 8mg was given. Patient went to PICU intubated and on propofol sedation. He was extubated the following morning and was discharged home 2 days later.

Summary: Foreign body aspiration (FBA) tallied over 3500 pediatric deaths each year from 2005 through 2007. In 2000, there were 17,000 ER visits secondary to FBAs, approximately 80% of pediatric FBA's occurring under the age of three. Immediate identification of symptoms could be life-saving (e.g., stridor, new-onset wheeze, aphonia, cough, dyspnea, cyanosis). Pediatric anesthesiologists must assess the risks and benefits of maintaining a child breathing spontaneously, risking possible movement in response to bronchoscopy, versus mechanical ventilation which could further lodge the foreign body or cause air trapping during bronchoscopy. Also, premedication with sedatives is balanced between keeping the child calm, so as not to further worsen the obstruction (crying/flailing/coughing), versus over-sedation and losing a patient's respiratory drive. Premedication with anticholinergics reduces airway secretions, as well as offsets vagal-induced bradycardia and rebound bronchoconstriction. All efforts must be made to reduce the risk of laryngospasm (sevoflurane), decrease cough with local anesthetic (aerosolized lidocaine) and/or use of an agent to maintain spontaneous ventilation (ketamine).




