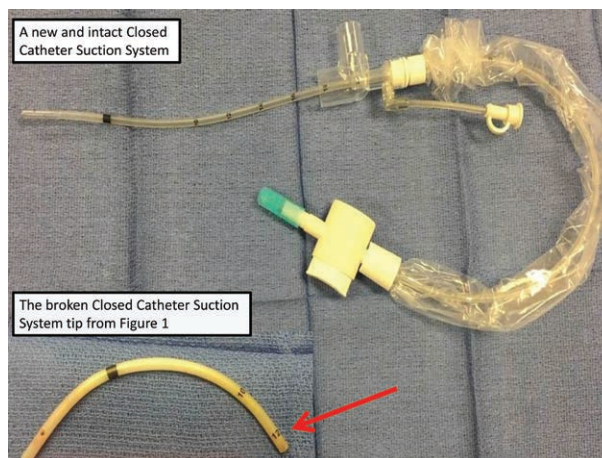


An Unlikely Airway Foreign Body

Diagnosis, Treatment, and Prevention

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Tracheal foreign bodies are common pediatric airway emergencies. Delays in diagnosis can lead to threatening airway complications. However, diagnosis is challenging, given that up to 52% of patients can have normal chest x-rays.¹

Compared with seeds and nuts, a closed catheter suction system as a tracheal foreign body is a rare occurrence.^{1,2} We present images of a bronchoscopy and retrieval of a 12-cm distal portion of a closed catheter suction system as shown in the image on the left that was undiagnosed for 7 days until the patient was turned prone for surgery. The broken fragment is shown with an intact closed catheter suction system for comparison in the image on the right.

There are two possible explanations for a retained closed catheter suction system fragment as a tracheal foreign body: spontaneous separation attributable to a manufacturer defect or inadvertent truncation of the catheter when force was used to pull back from a stuck position. The catheter could have been caught after it entered the Murphy eye of the endotracheal tube (ETT) or impacted in the lumen of ETT as a result of increased surface tension.³ If force is required to pull back the closed catheter suction system in an ETT, both the ETT and closed catheter suction system should be removed as one unit to prevent distal catheter dislodgement. When caring for intubated patients with a closed catheter suction system, visual inspection to check for an intact catheter should be done routinely. Finally,

bronchoscopy, which is the accepted standard diagnostic tool, should be considered early in postextubation patients with noisy breathing, coughing, or tachypnea to prevent delayed diagnosis of a distal closed catheter suction system fragment dislodgement.

Competing Interests

The authors declare no competing interests.

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References

1. Oncel M, Sunam GS, Ceran S: Tracheobronchial aspiration of foreign bodies and rigid bronchoscopy in children. *Pediatr Int* 2012; 54:532–5
2. Nurkin S, Waisman D, Davkin O, Kessel I, Vinograd I, Rotschild A: A rare complication of the closed tracheal suction system. *J Pediatr* 2004; 145:858
3. Raut MS, Joshi S, Maheshwari A: Stuck suction catheter in endotracheal tube. *Indian J Crit Care Med* 2015; 19:113–5

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