Airway Management for Endoscopic Retrieval of a Trichobezoar
Lieu Tran M.D., Audra Webber M.D., Neal Campbell M.D., Erica Sivak M.D., Susan Woelfel M.D.
Children’s Hospital of Pittsburgh of the University of Pittsburgh Medical Center

Patient Presentation
- 14 yo female with a 2 week history of abdominal pain, N/V, bloody diarrhea presents for diagnostic EGD and colonoscopy.
- PMH: Sjogren’s syndrome, asthma, and C. Dif colitis.
- Labs and preop abdominal CT are normal.

Anesthetic Management
- Routine IV induction, LMA placed.
- Unidentified foreign body (FB) revealed in second part of duodenum (Image 1).
- FB pulled out of the stomach into the lower esophagus.
- Unable to maneuver FB past upper esophageal sphincter.
- Attempts at pushing FB further down esophagus unsuccessful.

Management of Difficult Airway
- Propofol bolus given and intubation attempted.
- ETT below vocal cords, but would not pass further due to tracheal compression by bezoar.
- ETT removed, mask ventilation adequate.
- Snare holding FB was removed from esophagus, FB still present.
- Second and third intubation attempts unsuccessful, tube does not pass beyond vocal cords.
- Mask ventilation inadequate, patient began having oxygen desaturations.
- Succinylcholine given, cricopharyngeal muscle adequately relaxed, ETT passed beyond vocal cords.

Trichobezoar
- Image 1. (Top) Unidentified foreign body during endoscopy. Image 2. (Bottom) Trichobezoar.

Patient outcome
- Trichobezoar weighing 26g (8.0 x 3.5 x 2.5cm) (Image 2) was successfully removed by ENT after an hour of manipulation with frequent episodes of airway compression and oxygen desaturation.
- Patient remained intubated and transferred to the PICU due to concerns of airway edema.
- She was extubated the next morning with no sequelae.

Key Points
- Endoscopic removals of trichobezoars are rarely successful and airway management can be challenging.
- Trichobezoars consist of ingested hair with added mucous and food, and may present with vague abdominal pain.
- Few endoscopic retrievals of trichobezoars have been successful. Laparoscopic or open surgical procedures are often necessary. Successful endoscopic, laparoscopic and open removals were reported as 2/40 (5%), 6/8 (75%) and 99/100 (99%) respectively in 108 cases from 1990-2009¹.
- From our experience with this case, if a trichobezoar is identified during routine endoscopy while using an LMA, a definitive airway with an endotracheal tube is recommended prior to extraction of the foreign body. Surgical removal of the bezoar should also be considered.

References