Case Presentation:

This is a 58 year old male who presented to the emergency department at our institution with foreign body sensation in the throat after eating fish the night before. Although lateral soft tissue films of the neck demonstrated a linear foreign body, this was missed and the patient was discharged home. One week later, he re-presented with persistent throat pain. Otolaryngology was consulted to evaluate the patient. A computed tomography (CT) scan of the neck demonstrated a linear foreign body in the esophagus with migration through the esophageal wall. The tip of the object lied within the stroma of the right thyroid lobe with a surrounding 1.5 cm rim-enhancing collection. Using a direct laryngoscope and endoscopic optical forceps, the abscess was drained in the operating room through an entirely transoral route. A 2.0 centimeter sharp fishbone was successfully removed from the neck through the esophageal perforation and was the nidus of the abscess. A nasogastric tube was placed to bypass the perforation, a 14 day course of antibiotics instituted, and the patient was kept NPO postoperatively while his perforation healed. He had resolution of his neck symptoms without signs of mediastinitis nor recurrent neck abscess. The NG tube was removed at 14 days. A barium swallow with esophagram showed no leak.

Lateral Neck Film: CT 3-D Reconstruction:

TOP LEFT: The lateral neck film demonstrates a linear foreign body within the neck (arrow). TOP RIGHT: The 3D reconstruction on the right shows the foreign body (arrow) oriented in the neck towards the right thyroid lobe and suggests it has migrated laterally through the esophagus (arrow). BELOW: An contrast enhanced axial CT image which demonstrates a ring-enhancing collection in the right thyroid lobe with the foreign body (arrow) entering it.

CT Scan:

TOP LEFT: This intraoperative photo shows a perforation in the upper cervical esophagus and purulent fluid draining through it (arrow). TOP RIGHT: This photo shows the foreign body (arrow) as seen through the esophageal perforation into the neck using the optical forceps. BOTTOM LEFT: The foreign body that was removed from the patient. BOTTOM RIGHT: A barium swallow at 14 days, which shows no extravasation of barium and consistent with a healed perforation.

Intra-Operative Images:

Discussion: This represents a unique case of a foreign body (FB) in the upper digestive tract which migrated into the neck and managed by entirely endoscopic means. While cervical complications from ingested foreign bodies have been previously reported, these have typically been managed by open approaches1-3. In this case, an external approach could have required a hemi-thyroidectomy given the posterior location of the abscess within the thyroid gland. We were able to successfully drain the abscess, remove the foreign body, and avoid a cervical incision by employing a transoral transeosophageal route using endoscopic instruments. To our knowledge, this represents the first report of treating this problem and associated complication through a minimally invasive transoral transeosophageal method. Imaging played an important role in the management of this case. Although a CT scan is not routinely obtained in the evaluation of FB, it was obtained in this case due to concern of migration and complication. CT has been previously shown to be superior to plain radiographs in providing details regarding location and orientation4 and in cost-effectiveness5. The scan alerted us to the thyroid abscess. It also enabled us to use an endoscopic approach by helping us localize the perforation and migrated foreign body. A retained FB of the upper aerodigestive tract can have significant complications6-7, including abscess.

Conclusion: Foreign bodies of the aerodigestive tract can cause complications including perforation of the esophagus, migration into the neck, and abscesses formation. While an open transcervical open is a well-documented method for dealing with such a complicated problem, a minimally invasive endoscopic method for removal and drainage can be a viable option in select cases.

Bibliography:

2. Leung, NMW; Chan, HS; Vlantis, AC; Tong, MCF. A pharyngeal foreign body presenting as a painful neck mass. Otolaryngology-Head and Neck Surgery. 2010; 143:315-316.