

Tracheoesophageal Fistula Presenting With Gastric Pressurization

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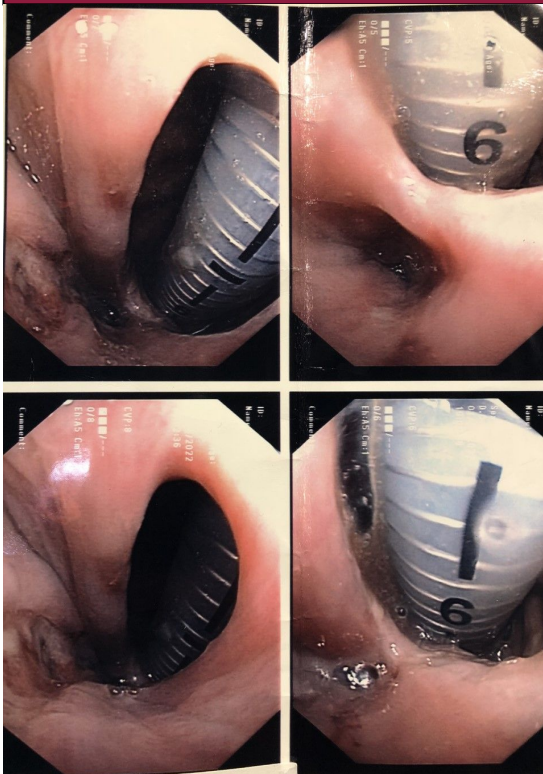
Introduction

- COVID patients may require intubation and mechanical ventilation
- They are at risk for associated infections, tracheomalacia, tracheal stenosis, and tracheoesophageal fistula (TEF).
- TEF is a devastating complication where the trachea and esophagus develop an abnormal connection in the lower airway.
 - Dramatically increased risk for mortality of critically ill patients by recurrent aspiration and pneumonias.
- TEF is associated with neoplasms and pressure induced ischemia of the common wall between the trachea and esophagus.
 - Can occur from over inflation of ET cuff.
 - Risk increased with concomitant use of an NGT.
- Definitive management requires surgical repair.

CT Scan



Endoscopic Confirmation of TEF



Case Presentation

Patient: 69 year-old male patient
CC: Shortness of breath, found to have Hypoxia and a + COVID PCR
Initial Course: Worsening Hypoxemia and increased work of breathing requiring intubation, insertion of an NGT, and ICU admission.
Day 29: Patient underwent percutaneous enterogastrostomy (PEG) placement and tracheostomy; noted intraoperatively that the tracheal mucosa was inflamed and friable.
Day 36: Bronchoscopy was performed through the tracheostomy tube due to concerns for mucus plugging. Friable mucosa with granulation tissue was seen at the distal end of the tube
 -An extra-long tracheostomy tube was used to bypass the granulation tissue.
Night 36: Ventilator measured a 50% discrepancy between the delivered and exhaled tidal volumes. Distended PEG-bag with a moving fluid meniscus in the tubing noted on exam.
Day 37: Bronchoscopic evaluation confirmed a 1 centimeter TEF.
Dispo: The patient underwent successful TEF repair and was discharged after an 6 months of recovery.

Discussion

- Critically ill patients who require prolonged support are at high risk of complications and device related injury.
 - Each device-day increases risks of infection, dislodgement, and pressure-related injuries.
- This case highlights the importance of serial physical examinations and understanding of device related complications.
- Unexpected findings should raise suspicion for the development of a serious complication.
 - Such as PEG Tube distension and a fluctuating fluid meniscus in the tubing.
- Our literature review revealed no reports of a PEG tube abnormalities as the presenting finding for TEF.