1 day old male born via SVD, pregnancy complicated by polyhydramnios, admitted to the NICU with profuse oral secretions and inability to tolerate feeds. NG and OG tubes attempted to be passed, but were unsuccessful.

Prenatal History:
Healthy mom, prenatal labs wnl, no ABO incompatibility
Ultrasound showing polyhydramnios, otherwise wnl
List of imaging studies

- Chest X-ray
- Fluoroscopy (post-operative)
Unsuccessful passage of NG tube

Air in the stomach and bowel
Imaging studies from PACS 2- s/p fistula ligation, open gastrostomy

NG tube in esophageal pouch
Surgical clips
Bibasilar atelectasis
Imaging studies from PACS 3- s/p esophagoplasty

Decreased lung volumes (atelectasis vs. aspiration)

NG tube in the stomach
Imaging studies from PACS 4- Barium Swallow

Contrast passage through distal esophagus and into the stomach

Narrowing at anastomotic site without leak
Discussion:
Esophageal Atresia with Tracheoesophageal Fistula

- Type A is the most common (85%)
- Majority have polyhydramnios in utero
- May be part of VACTERL association
- Esophageal atresia types present at birth
  - Excessive drooling, secretions
  - Inability to feed
  - Respiratory distress (aspiration)
- H-type may present later (months/years)
  - Prolonged history of respiratory distress with feeds, recurrent pneumonia etc

Image obtained from UpToDate.com
Data from: Clark, DC. Esophageal atresia and tracheoesophageal fistula. Am Fam Physician 1999;59:910. TEF types classified according to the scheme developed by EC Vogt in 1929, as modified by Gross.
Discussion:
Clinical and Radiographic Evidence

- Inability to pass NG tube
- Chest/abdominal X-ray
  - NG tube coiled in esophageal pouch suggests esophageal atresia
  - Air in the stomach and bowel if TEF present
- Water-soluble contrast in esophagus for fluoroscopy confirms the presence of esophageal atresia
- Upper GI series with thickened water-soluble contrast, or endoscopy + bronchoscopy for isolated TEF diagnosis
Discussion:
Patient treatment and further workup

- **Surgical repair**
  - +/- G-tube
  - Fistula ligation
  - Esophagoplasty

- **Workup for VACTERL**
  - Vertebral defects - Spine US
  - Anal atresia - Physical exam
  - Cardiac defects (PDA, ASD, VSD) - Echocardiogram
  - **TracheoEsophageal fistula**
  - Renal anomalies - Renal US
  - Limb abnormalities - Physical exam
Discussion:
Complications and long-term outcomes

- **Complications**
  - Anastomotic leak
  - Esophageal stricture
  - Recurrent fistulae

- **Long-term outcomes**
  - Dysphagia, GERD, respiratory tract infections
    - Routine monitoring of symptoms
  - Barrett esophagus risk is 4x the general population
    - Routine endoscopic surveillance required
UNC Top Three

1. Radiograph showing an enteric tube coiled in the upper esophagus + excess gas in the GI tract may suggest esophageal atresia with distal tracheoesophageal fistula
2. Fluoroscopy can be used for diagnosis and to evaluate for double fistulas, post-operative leaks or strictures
3. Further imaging (echocardiogram, renal US, spine US) is indicated to evaluate for VACTERL association
References


