OESOPHAGEAL PERFORATION - A CASE REPORT

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INTRODUCTION -

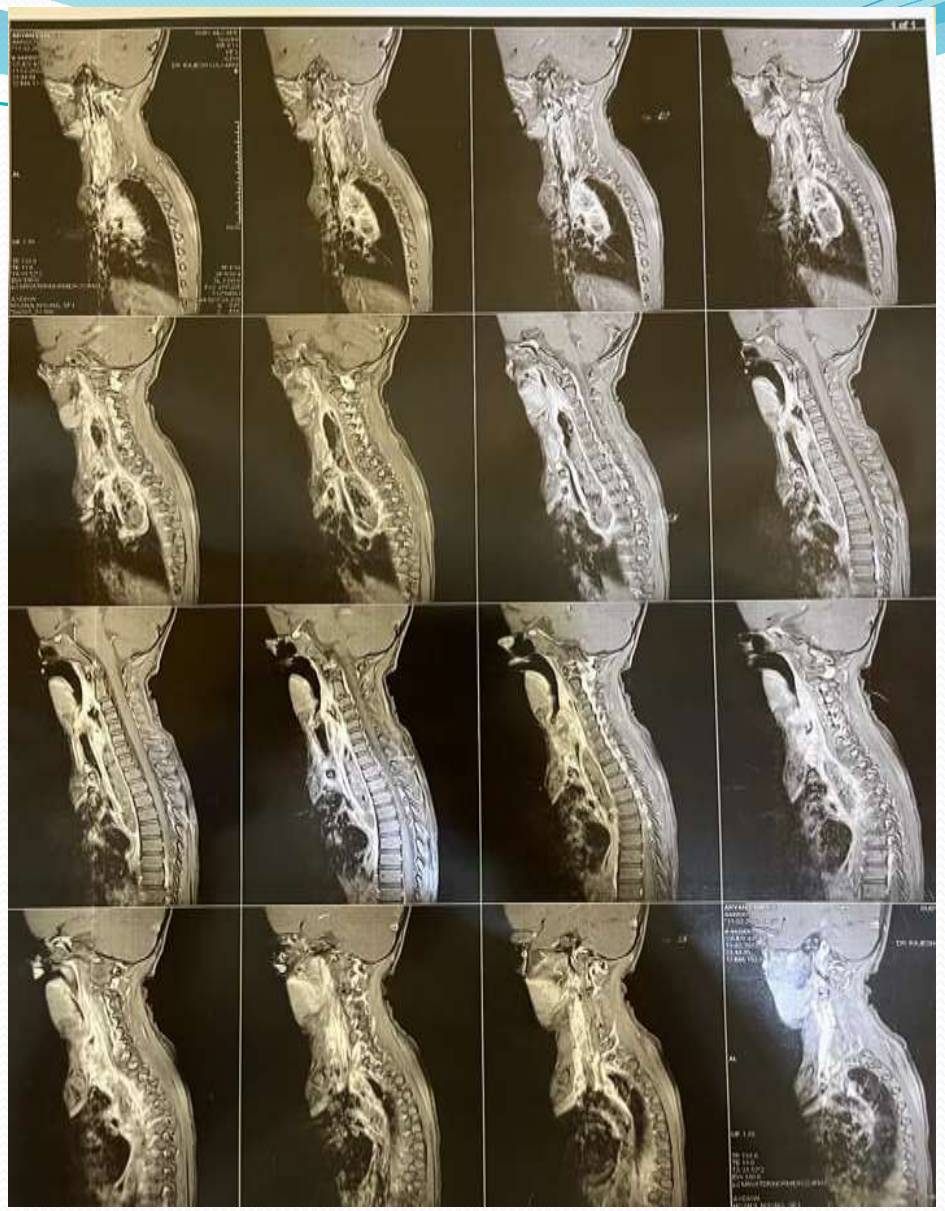
- Perforation of the esophagus is a well-recognized entity.
- It can be spontaneous, traumatic, or iatrogenic.
- Foreign body ingestion is usually seen in children between 1 and 3 years of age and 10 to 20% will be impacted.
- Still , most of them will be retrieved or removed without perforation.
- Late presentation of esophageal perforation due to foreign body impaction in children has been rarely reported although foreign body is removed regularly from the esophagus of many children.

- **CASE DETAILS -**
- An 8 years male child, was brought to the emergency department of the hospital with chief complaints of throat pain and cough since few hours.
- Child gives alleged history of foreign body ingestion that is of a chicken bone 2 days ago.
- He then developed non productive cough with dull aching throat pain. He had one episode of non bilious non projectile vomiting with frank pus. He also complained of sharp pain in his epigastric region.

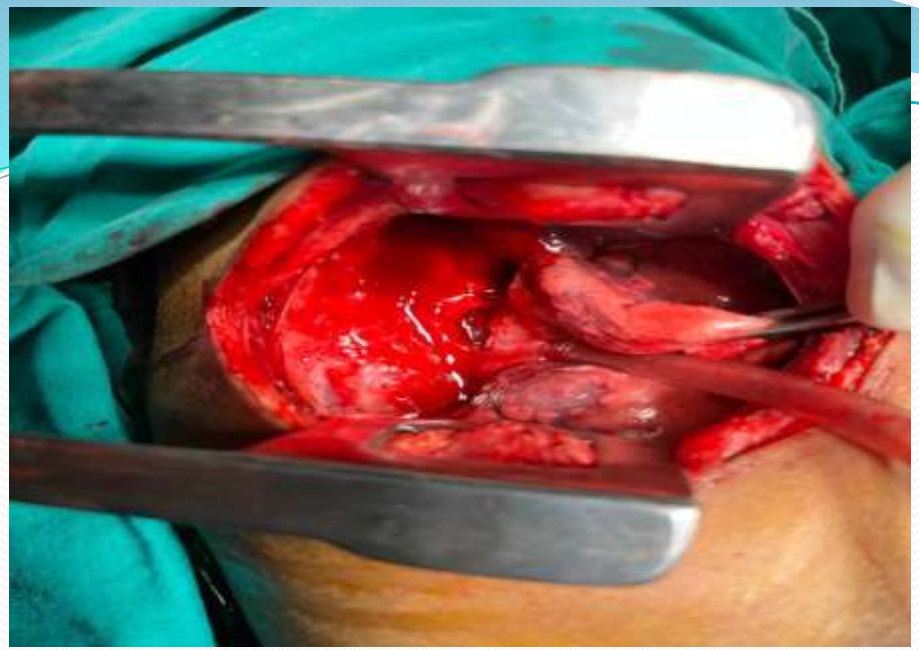
- For the above complaints patient was taken to a tertiary centre where diagnostic bronchoscopy was done and CT scan and MRI of neck and chest was done and a foreign body was visualised with a prevertebral abscess.
- In our hospital, on the basis of above imaging findings, a right posterolateral thoracotomy was performed with incision and drainage of retropharyngeal abscess.
- Ingested bone identified in the abscess cavity.
- Flexible esophagoscopy done to identify a 1cm perforation in the oesophagus at the cricopharynx.
- Ryles tube placed within the abscess cavity and closure done.

- On post operative day 6 of the thoracotomy, primary repair of posterior oesophageal rent was done with sternohyiod flap placement as secondary cover.
- The post operative period of the child was uneventful.
- But, on a routine post operative contrast study done to check the repair site before child could be started on feed, was suggestive of persistent extravasation of the contrast from mid oesophagus into right pleural cavity suggestive of leak.
- On further investigations, child was diagnosed with klebsiella pneumonia induced sepsis.

- Gastroscopy performed postoperatively was suggestive giving away of sutures at the flap site with high output esophageal fistula.
- Keeping in mind the severe sepsis, and poor general condition of the patient and the previous surgeries performed, decision was taken to conservatively manage the fistula by performing a bypass gastrostomy with feeding tube in situ.
- Therefore, child was started on gastrotomy feeds which he tolerated well and so was discharge later with the tube.



- **MRI & CT scan of neck and chest**



- **Intraoperative picture of oesophageal perforation and the removed piece of chicken bone**

DPU

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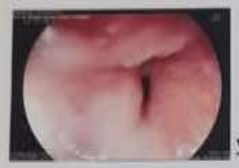
Sant Tukaram Maharaj Nagar Pimpri Pune
Pune - 411018
Phone No: 02027805100

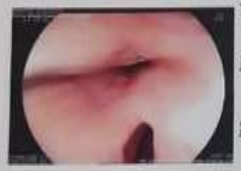
Patient ID: 2022020031
Name: Master Aryan kailas Landage
Age: 7 Y
Sex: M

Ref By: Dr. Pranav Jadhav
Study: OGD SCOPY with foreign body removal
Examined By: Dr. Vishnu Biradar
MD (Ped) PDCC (Ped Gastro)



Gastroscopy under GA

Vocal cords - normal

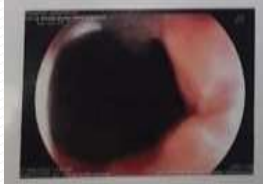


Cricopharynx - showed large, big rent at lateral wall with perforation

Esophagus - normal

Stomach - showed normal
Fundus showed no hiatus hernia

Impression:
Perforation at Cricopharynx
No foreign body seen from inside



Dr. Vishnu Biradar
MD (Ped) PDCC (Ped Gastro)

- **Esophagoscopy report**

- **DISCUSSION -**
- Foreign bodies can cause esophageal perforation by direct penetration, pressure, chemical necrosis, or during endoscopic removal.
- The usual sites affected are the three natural anatomic narrowings: the cricopharyngs, the crossing of the left main stem bronchus or aortic arch, and the gastroesophageal junction, mostly the cricopharyngs.
- Fish and chicken bones seem to be most commonly associated with major complications.

- **SYMPTOMS -**

- Clinical manifestation of foreign-body perforation may be seen immediately or as late as 2 weeks afterwards, as a gradual erosion of the impacted foreign body through the oesophageal wall.
- The most consistent symptom of an esophageal injury is pain localised along the course of the esophagus.
- Long standing severe sepsis due to esophageal perforation following foreign body impaction is a life-threatening condition, in which the esophagus, as well as surrounding tissues, becomes heavily inflamed, thus rendering any dissection hazardous and dangerous.

- **DIAGNOSIS-**

1. Chest X-ray
2. Water-soluble contrast esophagography
3. Computed tomography of the neck and chest
4. MRI of the neck and the chest
5. Esophagoscopy

- **TREATMENT -**

- Treatment depends on the aetiology, site, and size of perforation; the time elapsed between perforation and diagnosis; underlying esophageal disease; and the overall health status of the patient.
- Small perforations tend to seal without sequelae .
- Perforation of the cervical esophagus and intrathoracic esophagus that are confined to the mediastinum can be adequately treated using conservative measures in most patients.

- Criteria for non-surgical treatment include perforation that is confined to the mediastinum, drainage of the cavity back into the esophagus, clinical stability, and minimal clinical signs of sepsis.

- Perforations of the lower two thirds of the esophagus that affect the pleura, pericardium, or peritoneum require rapid surgical intervention.

- **CONSERVATIVE MANAGEMENT -**

- Antibiotics.
- Insertion of a nasogastric tube.
- Acid suppression and nothing by mouth.
- Endoluminal prosthesis.

- **SURGICAL MANAGEMENT -**

- Primary repair of perforation.
- Renforcment of repair with muscle, pleural or pericardial flap.
- Tube drainage of mediastinal collection.
- Esophageal replacement – using stomach or colon.

- **PROGNOSIS -**

- The perforation may be life-threatening and would lead to severe mediastinitis, empyema, and sepsis with the expected high mortality.
- Sometimes the perforation may have minimal septic complications but leads to chronic tracheoesophageal fistula.
- With an increased delay between perforation and treatment, the prognosis worsens owing to the establishment of sepsis and progressive organ failure.

- **CONCLUSION -**

- Oesophageal perforation should be diagnosed early for better treatment options, results and prognosis.
- CT scan of the chest should be done in all the cases.
- Conservative vs active management,
  Endoscopic vs Open surgery ,
  and the timing of surgery - should be individualised in each case.

Thank You