ESOPHAGEAL PERFORATION

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Question

- Which of the following is true with regard to esophageal anatomy?
- A. It consists of a mucosal, submucosal and serosal layer
- B. It travels to the right of the aorta below the carina
- C. It receives parasympathetic innervation via the cervical thoracic parasympathetic chains.
- D. It has a segmental arterial supply
- E. The lower esophageal sphincter is a well-defined anatomical sphincter
Case

- 53 year old female with PMH of ETOH abuse presented to an OSH with complaints of severe abdominal and chest pain after an episode of vomiting for 48 hrs.

- On exam she was afebrile, in mild distress with HR 120s, BP 90s/50s, left chest tube with purulent drainage. Labs were significant for a WBC of 13
Case

- CXR and CT scan of the chest showed a left sided effusion, a chest tube and foley was placed and the patient was transferred to UHB
- A CT of the chest was repeated **
- Contrast esophagram
- She was resuscitated in the CTICU she was given IVF bolus, intubated, central and a-lines were placed
Case

- Pt was taken to the OR for left thoracotomy, primary repair of esophageal perforation and intercostal muscle flap.

- Pt transferred back to the CTICU intubated on pressors in septic shock.
Post operative course

- POD#1-3 Pt remained febrile, with leukocytosis on and off pressors, 2\textsuperscript{nd} chest tube removed
- POD#4-5 Pt failed extubation, tracheosotmy was placed, went into a.fib
- POD#7-14 Pt’s wound was re-explored and irrigated, more chest tubes placed, hemodynamically labile with poor pulmonary status. Pt made DNR and expired on POD#14
Esophagus
Esophagus
Etiology

Location by cause

Treatment

- Factors important for selecting appropriate treatment are location, duration of the perforation, severity, status of the native esophagus.
- Control or minimize leak, maintain re-establish GI continuity, eliminate infection and distal obstruction, debride and drain.
SIGNS AND SYMPTOMS OF ESOPHAGEAL PERFORATION

Water-Soluble or Barium Contrast Esophagography, Chest X-Ray, Computed Tomography

Contained Perforation

Broad-Spectrum Antibiotics Parenteral Nutrition

Cervical

DRAINAGE

Surgical Repair Tolerable

PRIMARY REPAIR

Surgical Repair Intolerable

CONTROLL ED FISTULA

EXCLUSION AND DIVERSION

Uncontained Perforation

No Improvement <24 hr

Thoracic

Evaluation of Perforation

Abdominal

Malignancy

RESECTION

Management options

- Primary repair
- Drainage
- Esophageal diversion/resection
- Stents
SIGNS AND SYMPTOMS OF ESOPHAGEAL PERFORATION

Water-Soluble or Barium Contrast Esophagography, Chest X-Ray, Computed Tomography

Contained Perforation
- Broad-Spectrum Antibiotics Parenteral Nutrition

Uncontained Perforation
- No Improvement <24 hr
  - Cervical: DRAINAGE
  - Thoracic: Evaluation of Perforation
    - Surgical Repair Intolerable
      - CONTROLLED FISTULA
      - EXCLUSION AND DIVERION
    - Malignancy: RESECTION
Mortality


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Non operative criteria

- Early diagnosis and contained perforation/leak
- Drainage into the esophageal lumen
- Perforation is not proximal to obstruction, within a neoplasm or in the abdomen
- No signs of sepsis

Sepsis

- SIRS + active infection
- Must have at least 2 of the following criteria
  - Temperature $>38.3$ or $101 <36$ or $96.8$
  - HR $>90$
  - RR $>20$
  - WBC $>12K$ or $<4K$
Early Goal Directed Therapy

- ABCs
- CVP 8-12mmHg
- MAP>65
- Urine output 0.5ml/kg/hr
- Fluid bolus of 20-30ml/kg
- Broad spectrum antibiotics within 12hrs
- Start vassopressors when fluid challenge fails
Pearls

- Resuscitate → EARLY GOAL DIRECTED THERAPY
- Early diagnosis
- Avoid suturing esophagus proximal to an obstruction
- ****EXTEND the area of perforation superiorly and inferiorly to expose the extent of MUCOSAL injury
Question

Following a large meal, a man vomits several times and develops severe upper abdominal pain radiating through to his back. A CXR shows slight blunting of the left costophrenic angle. The next step in management should be.

- A. To obtain a serum amylase concentration
- B. Immediate exploratory celiotomy
- C. Aortography
- D. Gastrograffin study of the esophagus and stomach
- E. nasogastric tube intubation
References


