OESOPHAGEAL PERFORATION

Iatrogenic: (i)70% from within[20% upper, 80% site of pathology] [eg OGD/endo therapy/TOE pressure necrosis/ETT] (ii)30% from without [surgery eg antireflux/HH]
Spontaneous: sudden IAP vs closed glottis→prox to GOJ, L postlat to L pleural space [eg Booerhaave's/retch/lifting/defecation/parturition]
Pathological: cancer/ulcer/infection[(eosino oesophagitis)]/diverticula
Foreign Body: sharp/pressure necrosis/corrosive agents leaking
Penetrating trauma:
Blunt trauma: barotrauma/decelerating injury[(fixed points at cricoic, carina, POJ)]

Clinical features

Depends on **site/size/cause/time** from injury/mediastinitis or sepsis/food residue/free-drainage back into lumen
Progression: pleuromediastinitis (negative intrathoracic pressure pulls gastric contents through hole) → sepsis → shock

Symptoms: PAIN (neck/chest/epigastric severe+constant+worse on moving)
ODYNOPHAGIA/DYSPHAGIA
LOCAL EFFECTS: dysphonia, torticollis,

Signs: tachypnoea + tachyarrythmias + subcutaneous emphysema[medastinal>pleural perf] + septic shock
gastric contents in chest drain (food, pH<6)

Investigations

CXR: pneumomediastium/pneumothorax/hydropneumothorax/pleural effusion/collapse/consolidation
Contrast: identify site/establish if free drainage back [(but false negatives and limited practicality in unstable patient)]
OGD: identify site, attempt endoclip/stent, drainage, NJ
CT: oral constrast increases sensitivity

Management Site/size/free drainage back/food in chest/pathology/mediastinitis/time since injury

1. GENERAL
Resuscitate + antibiotics/antifungals/antisecretories + drainage (NG/chest drain/prevertebral lavage+drain)

2. CONSERVATIVE
Contained perf/free drainage back/no solid food/no mediastinitis or sepsis/long delay proving stability

3. DEFINITIVE MANAGEMENT
Endoscopy: (i)**Endoclips** for small holes (ii)**SEMS** elderly or frail with cancer [(remove early as migrate/pressure necrosis)] (iii)lavage
Surgery: overt sepsis/medastinitis/gross contamination/solid matter + failed NOM + associated injury/pathology
Postero-lateral thoracotomy/longitudinal myotomy as mucosal defect longer than muscular/debride/pleural lavage
First 24 hrs: (i)1° repair [(limited soiling)] (ii)T-tube repair[(controlled fistula, remove 6wks post-CT)]
Oesophagectomy if (i)extensive (ii)pathological [(if considered operable before perforation)]

CAUSTIC INJURIES

Accidental (kids, small volume, early presentation) or Deliberate (adult, large volume, delayed presentation)
Severity: corrosive agent's properties/concentration./dose/viscosity/duration of exposure
Acid=coagulative → self-limiting; alkali=liquefying necrosis → deep injury

Clinical features

Pain (oropharyngeal, chest, epigastric, abdo)
N&V +/- haemaemesis

Glossopharyngeal burn → obstruction due to oedema → dysnoea/stridor/dysphonia/drooling/hypersalivation

Management

1.Resuscitate (airway secured, lungs if aspiration, cardiovascular compromise)
2. Concurrent injuries (face/eyes need plastics/opthal)
3. OGD to stage injury 1 superficial → superficial ulcers with mucosal oedema/erythema
2a submucosa 2b muscularis propria → deep ulcers
3a full thickeness oesophagus only → focal necrosis
3b full thickness involves adjacent organs → extensive necrosis

Asymptomatic with minimal OGD findings → discharge if oral feeding tolerated
Stage ½ (ulcers): admit and observe 7 days → feeding from 48 hours → OGD in 6-8 wks (stricture)
Stage 3 (full thickness): surgery (oesophagogastrectomy + colonic reconstruction: immediate/delayed depends on degree of contamination)
**extensive circumferential mucosal lesions have high stricture/cancer risk so early surgery recommended*

Long-term

1. Stricture: (i)serial diltatation (leave for 6wks)
(ii)surgery: resect with colonic recon/bypass/stricturoplasty *latter two cancer risk/bact overgrowth in retained oesophagus*
2. Cancer: 16% SCC risk with decades-long latent period → early elective resection recommended

INHALED FOREIGN BODY

Oesophagus is commonest site in GIT for impaction (75%); can pass through and impact further
Mostly young kids; adults with reduced palatal sensation/psychiatric issues
6 sites of impaction: (a) Oesopagheal cricopharyngeus/aortic arch/left main bronchus (b)pylorus (c)duodenum (d)TI
Risk: benign strictures and perforation (peptic stricture/achalasia/webs/EO/SScl etc) *cancer less so*

Clinical features

Acute: history + dysphagia/pain at site of impaction + phayngo-laryngeal symptoms if cervical impaction
Chronic: recurrent aspiration/LRTI/empyema/oesophagitis/oesophageal stenosis or fistula

Investigations

AP+lateral radiographs (is it in oesophagus or tracheobronchial tree?)
OGD + extraction

Management

1. **Most pass through** (90%)
2. **OGD** in oesophageal impaction (10%)
3. Surgery in 1% if **fail to progress** (pylorus/duodenum/TI)**/dangerous features**(large/sharp/batteries)