

# Perforated viscera: treatment options

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# Principles

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- ❖ correct physiology
- ❖ IV antibiotics
- ❖ stop contamination
- ❖ damage control surgery where appropriate
- ❖ ICU care
- ❖ planned relook

# Peptic ulcer disease (PUD)

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- ❖ IV fluids, PPI, NGT
- ❖ non-operative Mx (NOM)
  - ❖ 2 prospective studies
  - ❖ Crofts TJ et al 1989: “non-operative Rx with careful observation’ safe except if age >70yr
  - ❖ Songne B et al 2004: >50% responded to NOM, predictive of need for surgery = HR>94bpm; age >59yr; pain on DRE; pneumoperitoneum size >L1 vertebra

## ❖ NOM (contd)

- ❖ most NB factor determining success / failure of NOM = whether perforation has sealed
- ❖ upper GI oral gastrografen study
- ❖ reasonable approach: initial trial of NOM if haemodynamically stable; no severe sepsis; small pneumoperitoneum; sealed perforation

- ❖ surgery

- ❖ NB to limit delay to operation: 2013 cohort study = 1hr delay → 2-4% decreased survival probability

- ❖ laparoscopic repair

- ❖ vs open = equivocal

- ❖ appropriate skills; usual benefits

- ❖ better washout possible

- ❖ not in septic shock

- ❖ laparoscopic

- ❖ sutureless only in <2mm perforations

- ❖ primary repair safe in 5-20mm juxtapyloric perforations BUT routine use of omental patch recommended

- ❖ open repair

- ❖ if contraindication to pneumoperitoneum

- ❖ if concern re integrity of laparoscopic repair

- ❖ resection

- ❖ in known/suspected malignant ulcers; giant ulcers; significantly bleeding ulcer; pyloric channel/duodenal stricture

- ❖ in most pts = as damage control surgery ie restore continuity at subsequent relook

- ❖ duodenal giant ulcers

- ❖ repair if unable to resect, protect via pyloric exclusion or Roux-en-Y gastrojejunostomy

- ❖ new options

- ❖ primary stenting for duodenal ulcers

- ❖ consider when technical surgical difficulties or severe comorbidities or delayed presentation

- ❖ NOTES

- ❖ with pneumoperitoneum (lower pressures than conventional laparoscopy)

- ❖ endoscope through perforation, washout, pull omentum into stomach, fix to mucosa with clips

# Small bowel

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- ❖ primary closure

- ❖ resection

  - ❖ primary anastomosis

  - ❖ clip & drop

  - ❖ stoma

# Appendix

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- ❖ initial non-operative Mx (NOM)
  - ❖ Abic, IV fluids, bowel rest +/- image-guided percutaneous drainage
  - ❖ symptoms localised to RLQ +/- phlegmon
  - ❖ IMMEDIATE “rescue” appendicectomy if failure of NOM (unresolving septicaemia, bowel obstruction, persistent pain/fever/↑WCC)
  - ❖ discharge when clinically resolved, cont oral ABic
  - ❖ follow-up 6-8wks

- ❖ initial NOM (contd)
  - ❖ ?interval appendicectomy
    - ❖ YES! especially if age >40yrs
      - ❖ primarily to exclude neoplasm
      - ❖ added benefit: recurrent appendicitis reported in 5-38% of pts

## ❖ appendicectomy

- ❖ emergency: generalised peritonitis / systemic sepsis / septic shock
- ❖ urgent / immediate: appendiceal abscess not amenable to image-guided percutaneous drainage
- ❖ delayed / rescue (ie in same admission): failure of NOM
- ❖ laparoscopic: ↓SSIs, ↓LOS, ↓time to oral intake; no ↑intra-abdominal collections
- ❖ BUT... use technique in which more experienced

- ❖ technique

- ❖ larger Lanz/McBurney's vs lower midline

- ❖ suction pus before irrigation to limit spread

- ❖ drains not necessary

- ❖ skin closure

- ❖ systemic review & meta-analysis = delayed  
might not ↓SSI (small studies, low quality), does  
significantly ↑LOS

- ❖ suggest loose partial closure / 2<sup>o</sup> closure

# Colon & rectum

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## ❖ diverticulitis

- ❖ contained / small abscess: ABic +/- percutaneous drainage
- ❖ complicated: laparoscopic / open resection & anastomosis & stoma

## ❖ C-scope

- ❖ small with good bowel prep: endoscopic clips, laparoscopic suture
- ❖ large / faeculant peritonitis: open or laparoscopic resection & anastomosis +/-stoma

- ❖ neoplasm

- ❖ open or laparoscopic resection & anastomosis +/- stoma

- ❖ other causes

- ❖ small: simple suture (lapscope / open)

- ❖ large / devascularised area: resection +/-stoma