CHAPTER OVERVIEW - SUPRAPUBIC REGION

This chapter covers key differentials in the suprapubic region such as Diverticlutis (The sigmoid can be very floppy), Bladder outflow obstruction and urological emergencies such as prostatitis. Always dip the urine to look for infection and do a bladder scan to rule out retention. There's nothing worse than putting a patient through the CT scan for lower abdominal pain and finding out that the only thing wrong is an enlarged bladder. (true story)

CLICKABLE Calculators

SOFA - Sequential Organ Failure Assessment score

Suprapubic pain +/-

1. Change in bowel habits – Think **Diverticulitis**
2. L.U.T.S – Think **urological issues (Retention/prostatitis/UTI)**
3. Female of childbearing age – Think **Gynaecological emergencies**

Examination:
General + Abdominal + DRE

Relevant Findings:
- Percussion Tenderness = Peritonism
- Enlarged, tender prostate on PR

Observations/NEWS
(**q-SOFA** sepsis criteria)

Q-SOFA Sepsis Criteria
- ❑ SBP < 100 mmHg
- ❑ GCS < 15
- ❑ RR > 22/minute

If 2/3 of the above present = SEPSIS

Investigations:
1. **Bloods**: FBC, U&E, LFT, Coagulation screen, G&S
2. **Urine Dip + Beta HCG**
3. **Bladder Scan**

Septic/Unstable patient

YES - Urgent senior advice

1. NBM + Strict Input/output charting
2. Consider urinary catheterization
3. IV Fluids (see NICE guidelines)
4. Regular Paracetamol + Opiate and PRN Morphine + Antiemetic
5. IV Antibiotics if septic/ deranged inflammatory markers*
6. Stop Anticoagulants if bleeding/Abnormal Coag
7. Follow AKI bundle if AKI**

Fluid Guidelines

AKI Guidelines

While awaiting senior review – DO THIS..

* Refer to trust guidelines for choice of antibiotics
** Refer to trust AKI guidelines

NO - Review on ward round

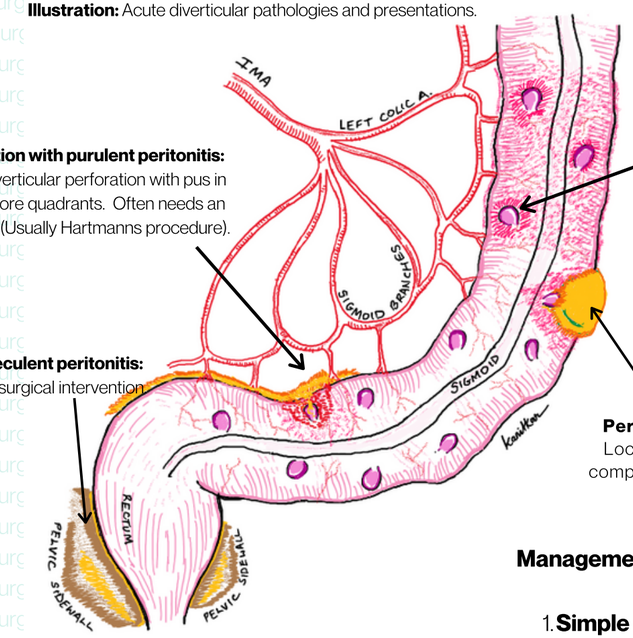
1. Orally Sips only
2. AKI - IV fluids + medication review **
3. Regular Paracetamol + Opiate and PRN Morphine + Antiemetic
4. VTE Prophylaxis
5. Pelvic USS (Women of childbearing age)

DIVERTICULITIS

"Colonic diverticula are protrusions of mucosa at points of weakness in the colon's muscular wall where the vessels enter. They are not 'true' diverticula, but rather protrusions of the mucosa.
The Western diet leads to less bulky stools.
Small, hard stools require greater intraluminal pressures. These high pressures produce the diverticula"
(Schein's common sense emergency abdominal surgery)

They are **most common** in the SIGMOID COLON

Illustration: Acute diverticular pathologies and presentations.



Perforation with purulent peritonitis: Acute diverticular perforation with pus in two or more quadrants. Often needs an operation (Usually Hartmanns procedure).

Perforation with faeculent peritonitis: High mortality despite surgical intervention

Acute uncomplicated diverticulitis: Acute inflammation of the diverticulum following obstruction by a small faecolith or a food particle such as a seed.

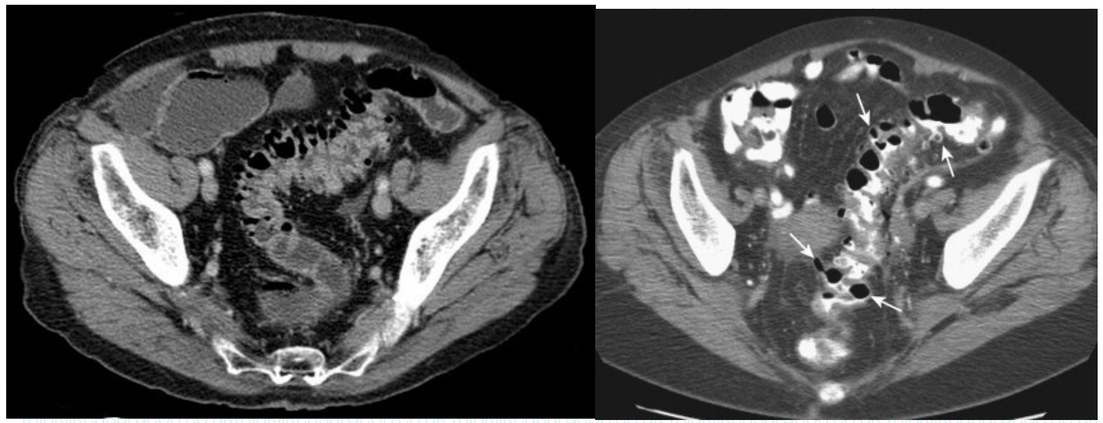
Perforation with local abscess: Localised abscess formation after complicated diverticulitis. Consider IR drainage (If amenable).

Presentation - Can be due to:

1. **Diverticulitis** - LLQ pain + Altered bowel habits (constipation or diarrhoea) +/- PR bleeding.
2. Diverticular **bleed** - Altered bowel habits (Recent constipation or even diarrhoea) + PR bleeding.
3. Diverticular **perforation** - Peritonitic +/- Septic
4. Chronic diverticulitis - **FIstula** (commonly Colo-Vesical or Colo-Vaginal) and diverticular **stricture** with large bowel obstruction
5. Diverticular **Abscess -** Previous diverticulitis with sepsis.

Investigation of choice -

- CT AP + I.V contrast (Diverticulitis/complications) and CT mesenteric angiogram (Diverticular bleed)
- Colonoscopy to rule out malignancy, as it can co-exist with diverticulitis. (After resolution of acute episode - 6/52)



Images: Left - CT AP with I.V contrast showing Sigmoid diverticULOSIS and **Right -** Sigmoid DiverticULITIS

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Differential diagnoses are very important.

1. THINK **Ischaemic colitis** (IHD, AF, Immunosuppression)
2. THINK **Infective colitis** (Recent antibiotics/ immunocompromised) - Send stool C/S urgently
3. THINK **IBD** (F/H/O Crohns Colitis/Ulcerative Colitis)
4. THINK **Colonic cancer (**Family history, age,Wall thickening on CT)

Complications - May needHDU/ITU escalation

1. Acute -
   - Local - Perforation, Bleeding and abscess formation
   - Peritonitis (Purulent or faeculent)
2. Chronic -
   - Stricture & large bowel obstruction
   - Fistulas (Colo-Vesical / Colo-Vaginal/ Coloenteric)

Management of Acute Diverticulitis (Based on presentation)

1. **Simple** diverticulitis - No Antibiotics, Antibiotics if septic or immunocompromised
2. Diverticular **bleed** -
   - Stool chart
   - Stop anticoagulants +/- PRBC transfusion
   - IR Embolisation
3. Complicated diverticulitis
   a. **Abscess/collection**
      i. Conservative management with antibiotics, if<5cm or multiple small.
      ii. IR drainage, if >5cm, accessible, well formed in progressively septic patient
      iii. Laparoscopic or open washout required if failed conservative or IR drainage..
   b. **Purulent/Faecal peritonitis**
      i. Purulent peritonitis - Emergency Laparoscopy/Laparotomy + lavage OR Hartmanns procedure
      ii. Faeculent peritonitis - Emergency Hartmanns procedure
   c. **Fistulas** are treated electively, following the **SNAP** protocol. (**S**epsis control, **N**utritional support, Assessing **A**natomy, **Pl**anning procedure)
   d. **Diverticular Stricture** can have varied presentations:
      i. Acute large bowel obstruction. Ideally patients should have a laparotomy and resection but in unfit patients, olonic stent can be considered.
      ii. Chronic large bowel obstruction- Need to exclude cancer by colonoscopy + biopsy before planning resection.

WORTH A READ - EAES

Radiopaedia

AN INTERESTING CASE

UROLOGICAL ISSUES

WORTH A READ - EAU

CYSTITIS - Inflammation/ infection of the urinary bladder.

- Uncomplicated cystitis **-**

Acute, sporadic or recurrent cystitis limited to non-pregnant, pre-menopausal women with no known relevant anatomical or functional abnormality.

Presentation - Dysuria, frequency and urgency (L.U.T.S)

Investigation of choice - Urine analysis, Urine C&S

Management -

1. Oral antibiotics
2. Analgesia

- Complicated cystitis - Acute cystitis in

1. Male sex/ Pregnant female
2. Indwelling urinary catheter
3. Structural & functional abnormality in bladder
4. Immunocompromised patients.

PROSTATIS - Bacterial infection of the prostate gland.

Presentation - Supra-pubic pain + L.U.T.S

Investigation of choice - Clinical diagnosis.

Urine analysis + Urine C/S

Management -

- Acute prostatitis - treat as complicated UTI

1. I.V antibiotics
2. Sepsis 6

- Chronic prostatitis - Long course oral antibiotics

FOURNIERS GANGRENE

A sub-category of necrotising fasciitis caused by poymicrobes. It can involve the perineum, perianal region and external genitalia. It can be very aggressive and fatal. Patients can mount significant S.I.R.S. (Systemic Inflammatory Response Syndrome).

Management -

1. NBM + I.V Fluids
2. Start broad spectrum intravenous antibiotics
3. SEPSIS 6 and send cultures
4. Surgical debridement of the wound within 24hrs of presentation

Bibliography:

- https://uroweb.org/wp-content/uploads/EAU-Pocket-Guidelines-on-Urological-Infections-2021.pdf
- Commissioning guide: Colonic diverticular disease Commissioning guide 2013 [Internet]. 2013 [cited 2021 May 6]. Available from: www.nice.org.uk/accreditation

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- **Radiology Masterclass** – A high-quality, world-class educational service providing free access to radiological tutorials. They also offer courses that cover the undergraduate imaging curriculum as specified by the Royal College of Radiologists. We have linked to a few of their courses throughout our book. If you want to further your radiological skills or get a certificate (for your portfolio) and CPD points, be sure to explore their website https://www.radiologymasterclass.co.uk/