ACUTE ABDOMEN

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- COMMONEST CAUSE OF EMERGENCY SURGICAL ADMISSION
- CHALLENGING DISEASE VARIETIES
- RANGING FROM SIMPLE TO LIFE THREATENING DISEASES

simple appendicitis → life threatening perforated appendicitis or ischemic bowel

Acute abdomen

- The primary symptom is abdominal pain

ASSESMENT

- A full history is a key
- Complete physical exam
- Needs different investigations

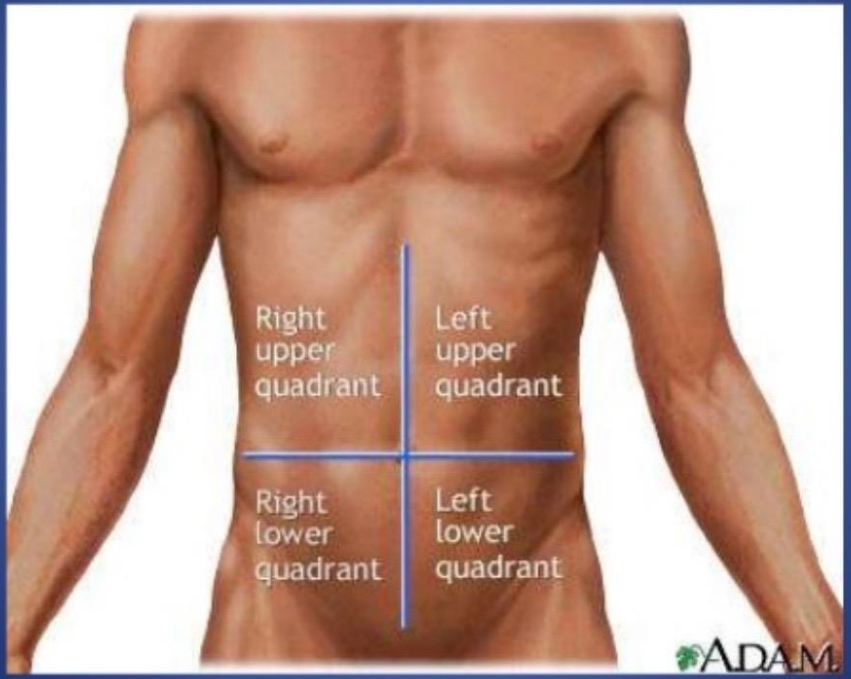
TYPES OF ABDOMINAL PAIN

- VISCERAL poorly localized, sensitive to stretching (bowel obstruction) or ischemia
- PARIETAL irritation to peritoneum
- REFERRED away of site of origin of pain (T10 dermatome)

Acute abdominal pain

- Two approaches
- systems
- Abdominal tomography (4 quadrants)

Abdominal Topography



Physical Exam (O)

- Palpate each quadrant
  - Work toward area of pain
  - Warm hands
  - Patient on back, knee bent (if possible)
  - Note tenderness, rigidity, guarding, masses

History:
onset
duration
site
type → colicky, burning, cramping, or stabbing
previous attack (if on & off RLQ pain → not appendicitis maybe crohn's)
weight gain/loss
fever
jaundice

Laboratory Test

history
physical
labs
radiology

2/4 50/50

- CBC (limited clinical utility)
  leukocytosis (most commonly seen → left shift (neutrophils)
  sepsis → leukopenia (bad sign)
- UA / Urine culture
- Lactic acid mainly for ischemia (ischemic bowel)
- LFT / Amylase / Lipase
- CE / Troponin epigastric pain → maybe MI
- HCG (quant / qual) gynecology → lower abdominal pain
- Stool Culture infectious colitis ddx of central & lower abdominal pain

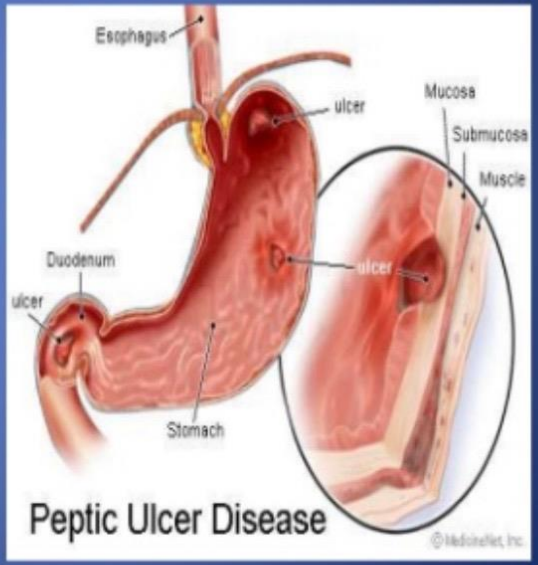
Radiographic Test

- Plain abdominal radiographs or abdominal series has several limitations and is subject to reader interpretation.

- CT scan in conjunction with ultrasound is superior in identifying any abnormality seen on plain film.

Peptic Ulcer Disease

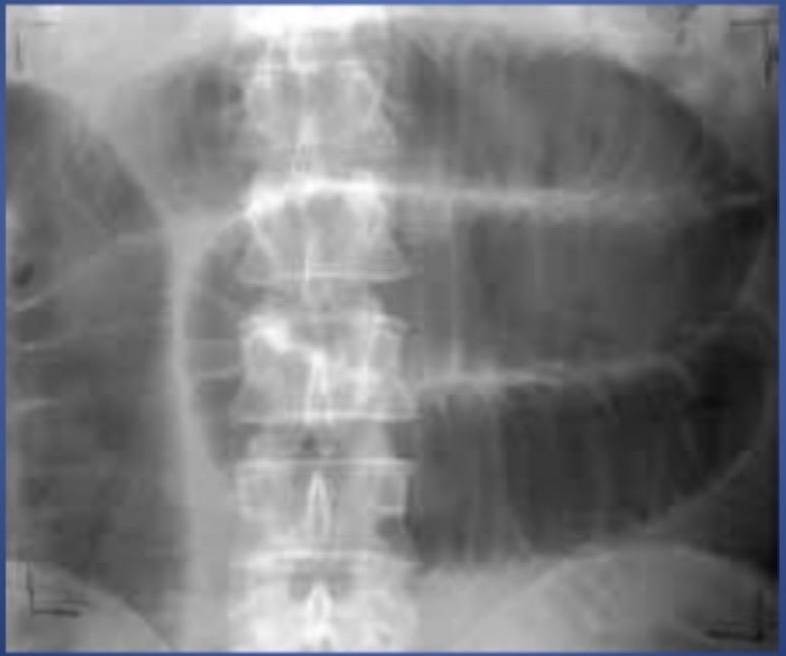
- Steady, well-localized epigastric or LUQ pain
- Described as a “burning”, “gnawing”, “aching”
- Increased by coffee, stress, spicy food, smoking
- Decreased by alkaline food, antacids



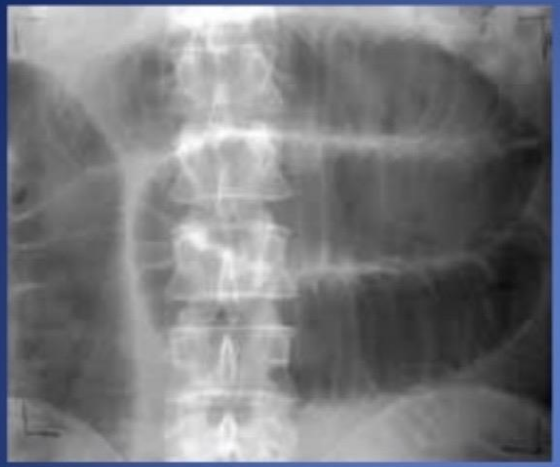
BOWEL OBSTRUCTION

- SMALL BOWEL VS LARGE BOWEL OBSTRUCTION small bowel obstruction → late constipation
- ADHESIONS ARE THE COMMONEST CAUSE
- IN A VIRGIN ABDOMEN: DON'T LET THE SUN SET ON A BOWEL OBSTRUCTION!

ABDOMINAL XR

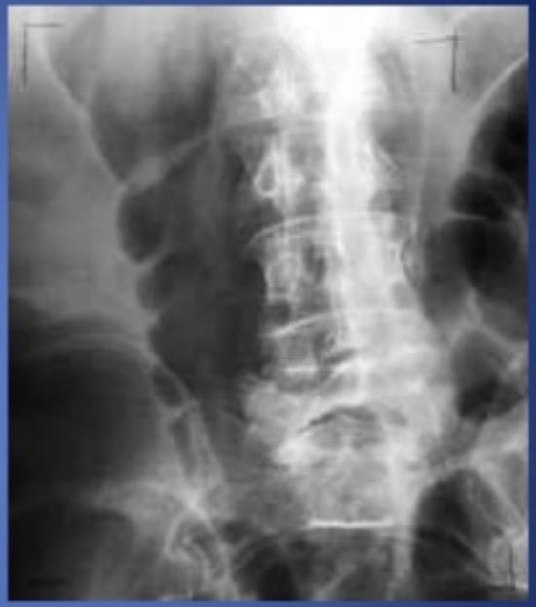


dilated small intestine → obstruction → distension (visceral pain)



SBO

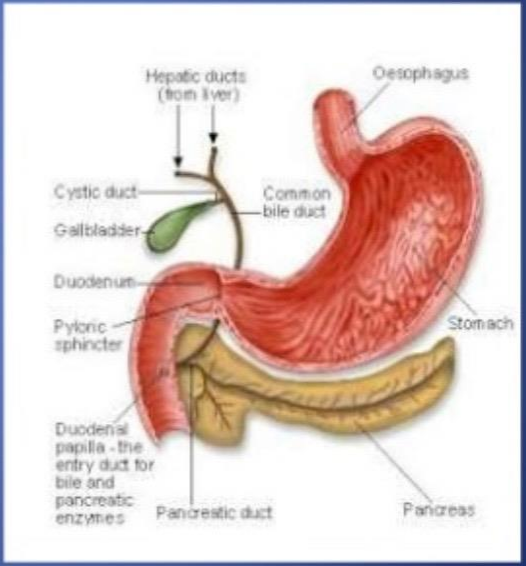
LBO



haustra → large bowel

Pancreatitis

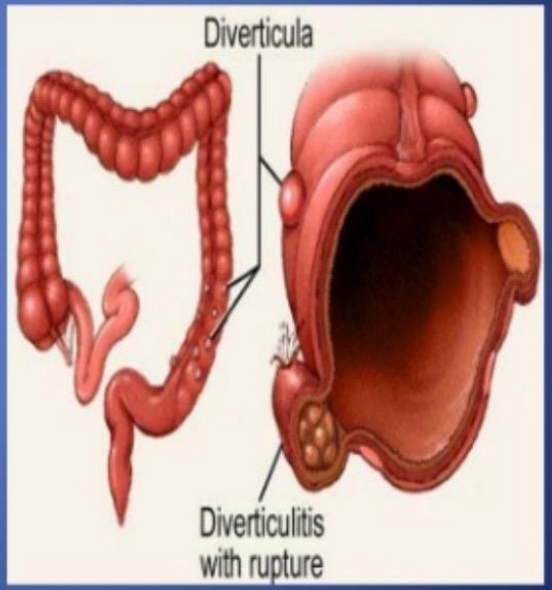
- Inflammation of pancreas
- Triggered by ingestion of EtOH; large amounts of fatty foods
- Nausea, vomiting; abdominal tenderness; pain radiating from upper abdomen straight through to back
- Signs, symptoms of hypovolemic shock



Diverticulitis

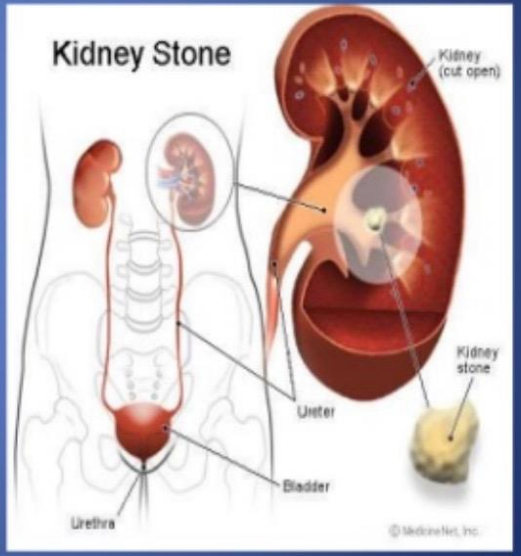
most common → sigmoid colon
can affect all bowel except rectum

- Pouches become blocked and infected with fecal matter causing inflammation.
- Pain, perforation, severe peritonitis.



Kidney Stone

- Mineral deposits form in kidney, move to ureter
- Often associated with history of recent UTI
- Severe flank pain radiates to groin, scrotum
- Nausea, vomiting, hematuria
- Extreme restlessness



Ectopic Pregnancy

- Fertilized egg is implanted outside the uterus.
- Growth causes rupture and can lead to massive bleeding.
- Patient c/o of severe RLQ or LLQ pain with radiation.

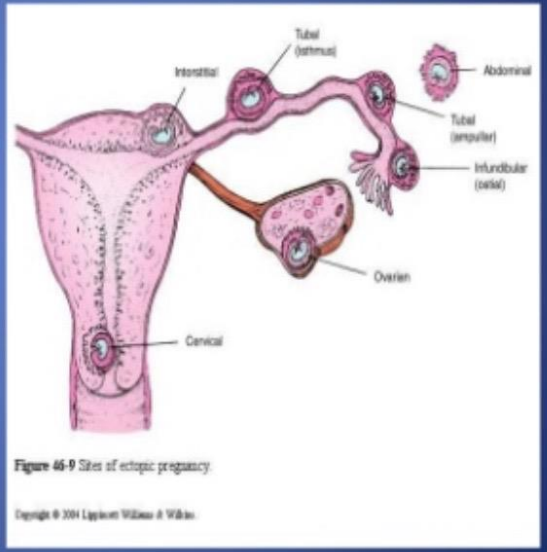
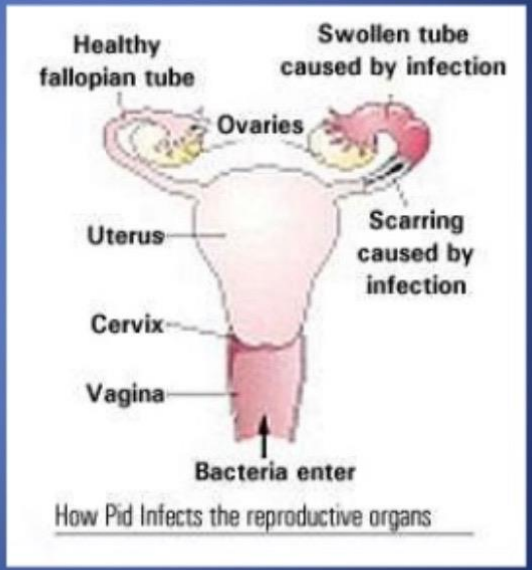


Figure 46-9 Sites of ectopic pregnancy.

Pelvic Inflammatory Disease

sexually active people

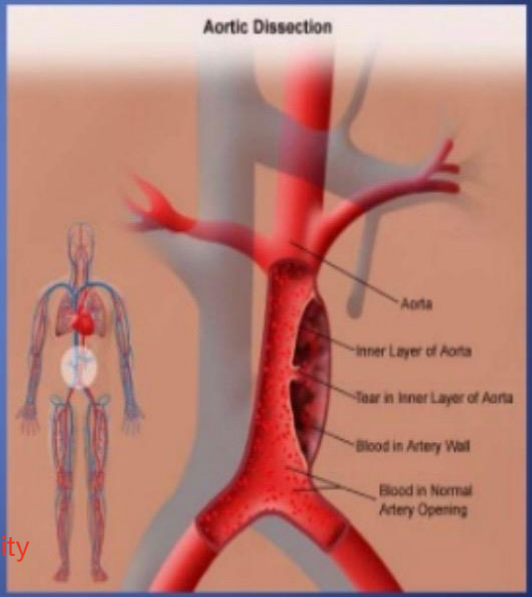
- Inflammation of the fallopian tubes and tissues of the pelvis
- Typically lower abdominal or pelvic pain, nausea, vomiting



How Pid Infects the reproductive organs

Abdominal Aortic Aneurysm

- Localized weakness of blood vessel wall with dilation (like bubble on tire)
- Pulsating mass in abdomen
- Can cause lower back pain
- Rupture shock, exsanguination



free rupture/perforation → will not be alive to ER
contained perforation → emergency (high mortality if ignored)

Mesenteric Ischemia (MI)

- Diagnosis can be divided into the following:

1. **Arterial insufficiency**
   - Occlusive – Embolic (A. Fib) / Thrombotic
     - Embolic MI has the most abrupt onset.
   - Nonocclusive – Low flow state (AMI / Shock)
     - Usually has clinical evidence of a low flow state (acute cardiac disease)

Mesenteric Ischemia (MI)

usually after bowel surgery (seen in young patients)
treat with anticoagulants (surgery only if advanced)

2. **Venous – Mesenteric Venous Thrombosis**

- Occurs in hypercoagulable states.
- Usually is found in younger pts.
- Has a lower mortality.
- Can be treated with immediate anticoagulation.

disproportionate pain → bowel ischemia

Ischemic Colitis

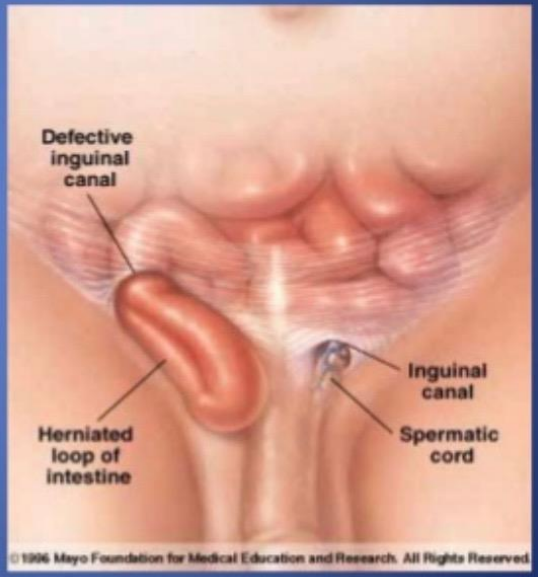
- It is a diagnosis of an older patient.
- Pain described as diffuse, lower abdominal pain in 80% of pts.
- Can be accompanied by diarrhea often mixed with blood in 60% of patients.
- Compares to mesenteric ischemia, this is not due to large vessel occlusive disease.
- Angiography is not indicated. If it is performed it is often normal.

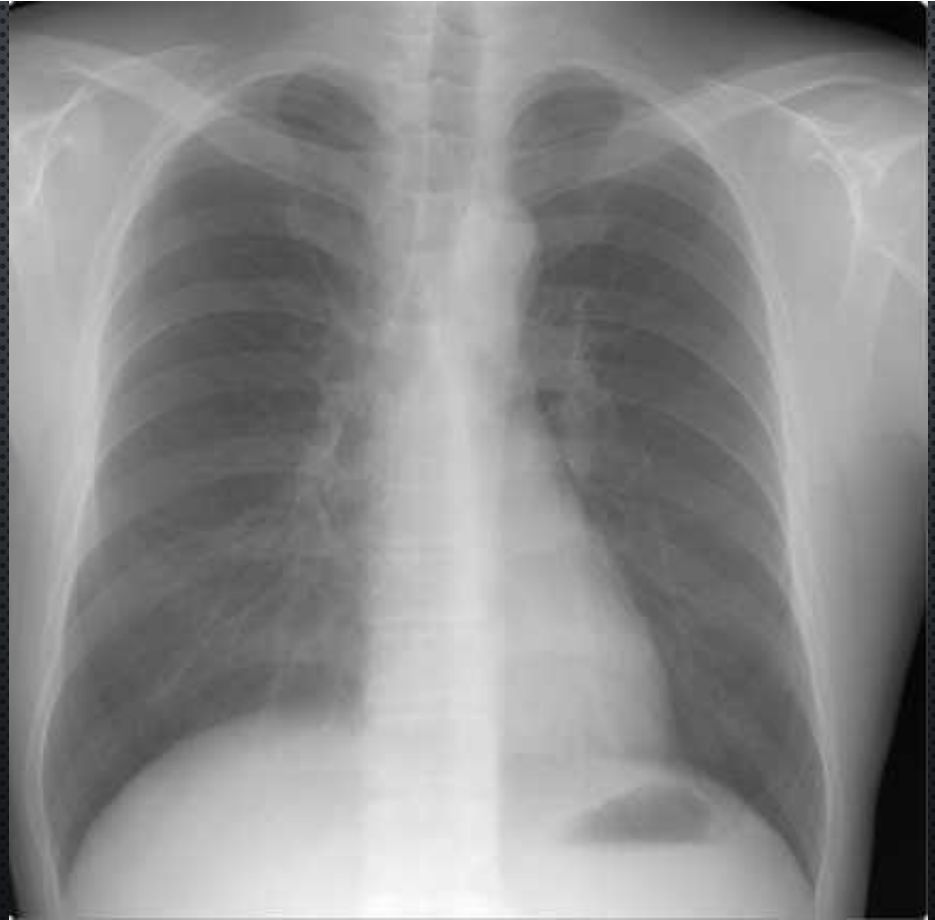
Extrabdominal Diagnoses of Acute Abdominal Pain: **Cardiopulmonary**

- Pain is usually in upper half of abdomen.
- A chest film should be done to look for pneumonia, pulmonary infarction, pleura effusion, and / or pnemothorax.
- A neg. film plus pleuritic pain could mean PE.
- If epigastric pain is present one should inquire about cardiac history, get and ECG, and consider further cardiac evaluation .

Inguinal Hernia

- Protrusion of the intestine through a tear in the inguinal canal.
- Usually identified by abnormal mass in lower quadrant, with or without pain.
- Strangulation can lead to necrosis.





pneumoperitoneum (gas between liver & diaphragm)

gold standard in emergency is CT (90% sensitivity)