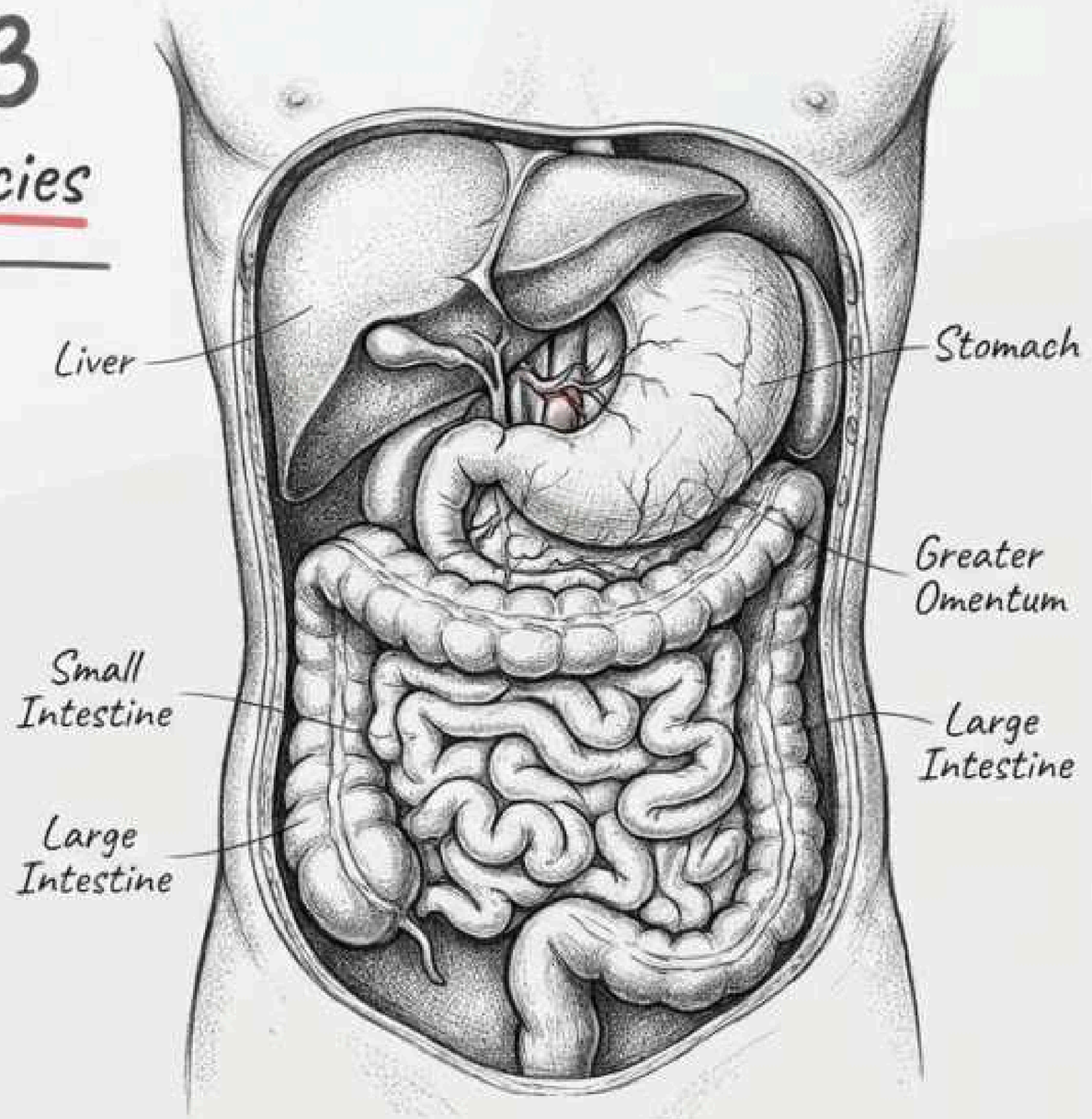
MED 542 B – LECTURE 3

The Acute Abdomen: Surgical Emergencies

At a glance:

- Assessing abdominal pain
- Peritonitis
- Appendicitis
- Gallstone disease
- Bowel obstruction
- Perforation
- Acute pancreatitis
- Ischaemia
- Aortic aneurysm



Acute Abdomen = Sudden, severe pain that may need urgent surgery.

¶ 3.1

The Protocol

History

↓

Examination

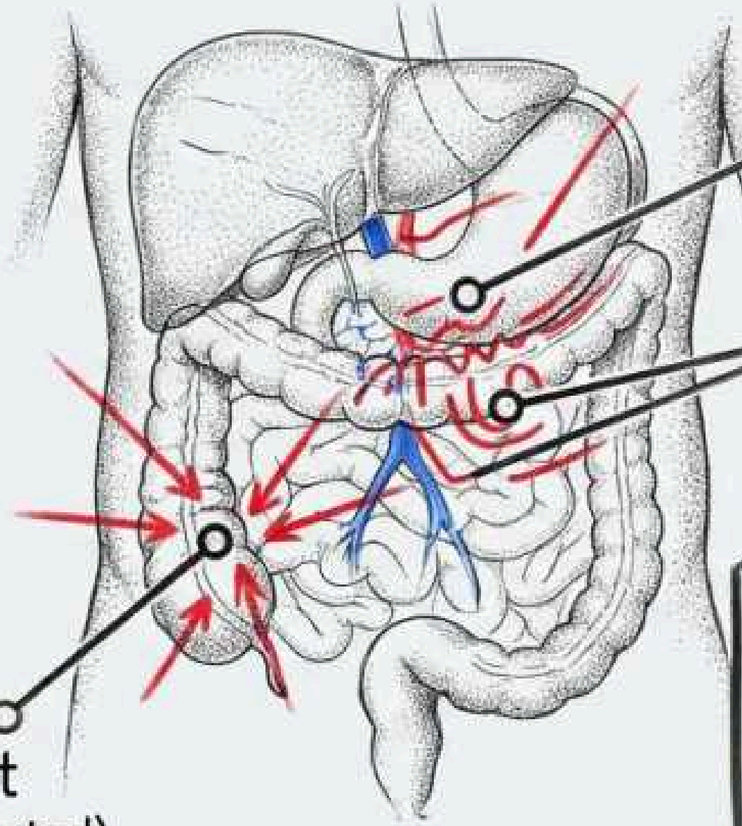
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Blood Tests

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Imaging (often CT)

The Pain Map



Location
(Where is it?)

Character
(Waves vs. Constant)

Onset
(How it started)

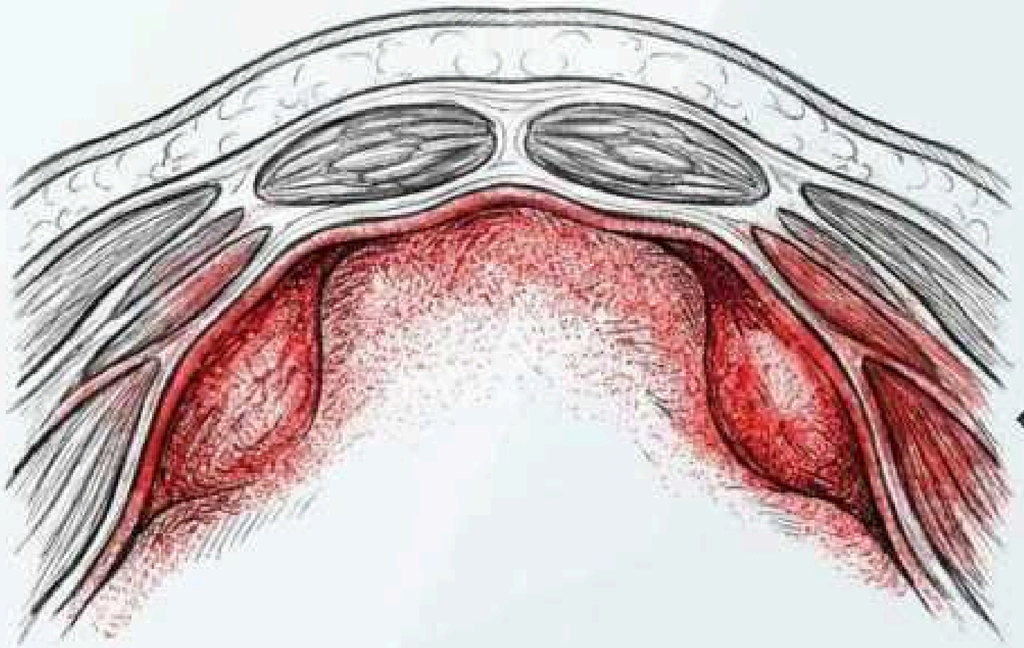
Associated Symptoms
(Diagnostic Filters)

- Vomiting
- Fever
- Changes in bowel habit

These narrow the possibilities.

Peritonitis

¶ 3.2





Pathology:

Inflammation of the abdominal lining. Usually caused by infection or a leak of gut contents.

Exam Findings:

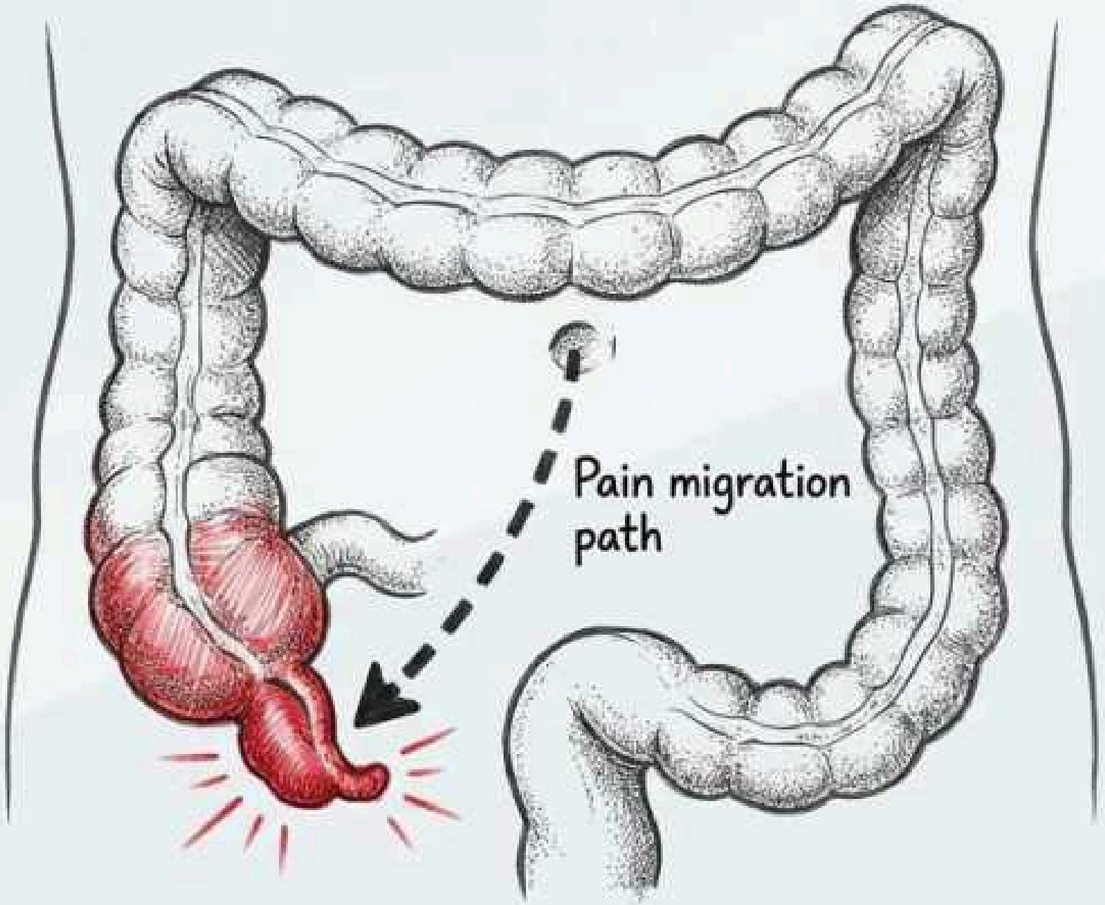
- **Guarding:** Involuntary tensing of the muscles.
- **Rigidity:** Abdomen feels hard/stiff.
- **Tenderness:** Pain made worse by movement or coughing.

URGENT SURGERY

Acute Appendicitis (Presentation)

¶ 3.3

- **Status:** The commonest surgical emergency of the abdomen.
- **Demographic:** Common in children and young adults.
- **Mechanism:** Starts at navel → Moves to lower right abdomen (inflamed appendix irritates nearby lining).



Clinical Triad Checklist

- ☐ Loss of appetite
- ☐ Nausea
- ☐ Mild fever

WARNING: Untreated → Appendix can burst → PERITONITIS.

Acute Appendicitis (Treatment Pathways)

¶ 3.4

Uncomplicated Appendicitis

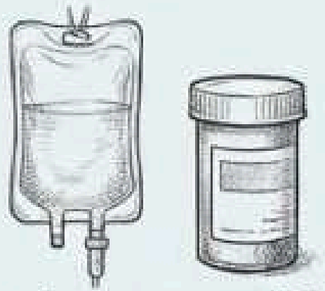
Path 1: Standard Treatment



Appendicectomy

→ Usually performed via keyhole surgery.

Path 2: Alternative Treatment



Antibiotics Alone

→ Evidence: 2020 American Trial shows this treats many cases.

⚠ Caveat: Some patients later need surgery.

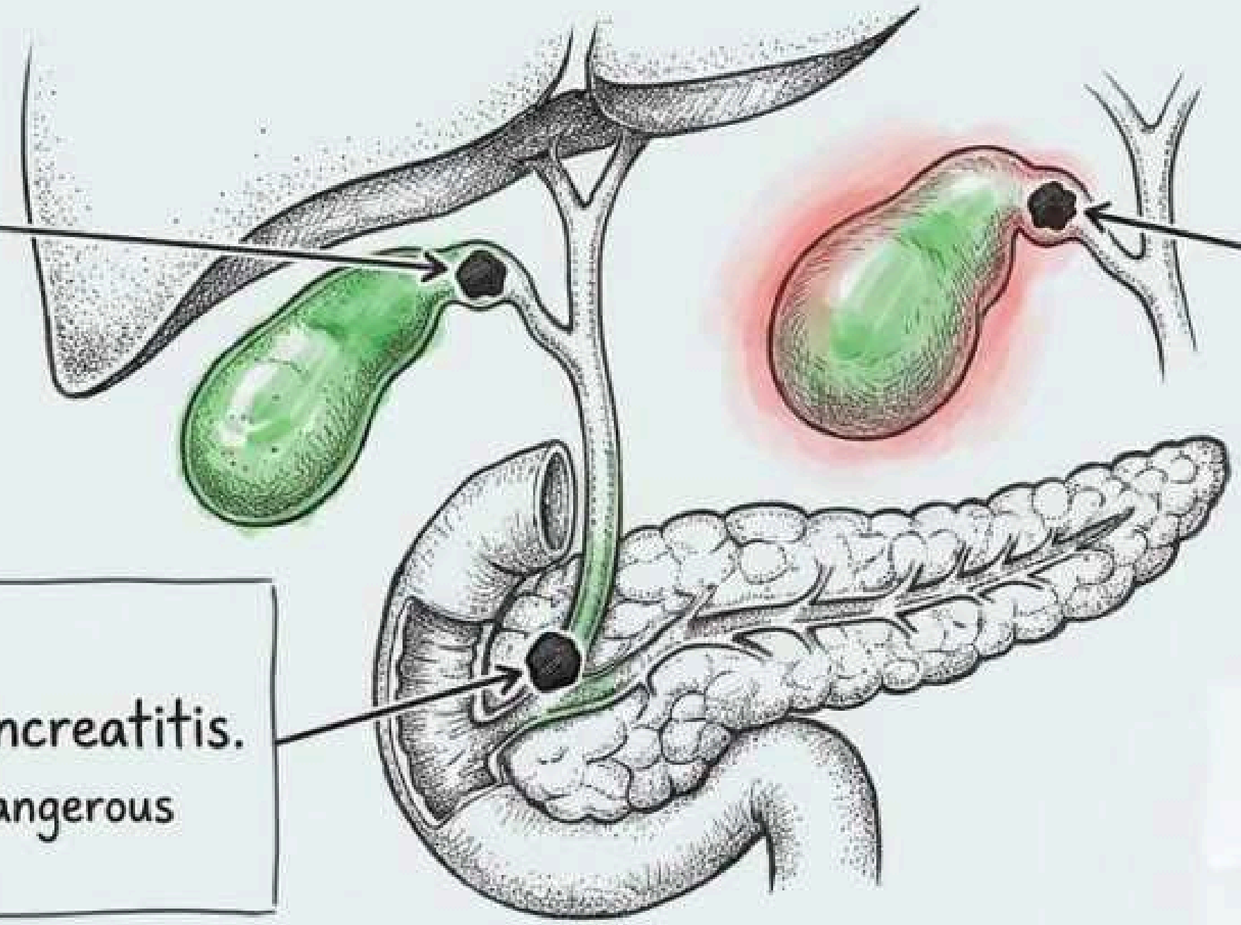
The choice must be discussed with patients.

Gallstone Disease Spectrum

¶ 3.5

Context: Gallstones are common, usually asymptomatic.

Blockage Point 1:
Biliary Colic.
Upper right pain after meals.



Blockage Point 2:
Acute Cholecystitis.
Persistent outlet block → Inflammation + Fever.

Blockage Point 3:
Cholangitis OR Pancreatitis.
Bile duct block → Dangerous infection / Jaundice.

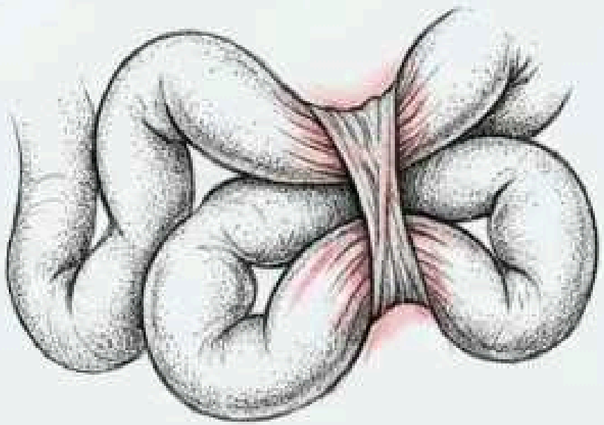
Treatment Protocol: Keyhole surgery to remove the gallbladder is standard for symptomatic stones.

Bowel Obstruction

¶ 3.6

Universal Symptoms: Colicky pain, vomiting, abdominal swelling, failure to pass wind or stool.

Small Bowel Obstruction



Causes:

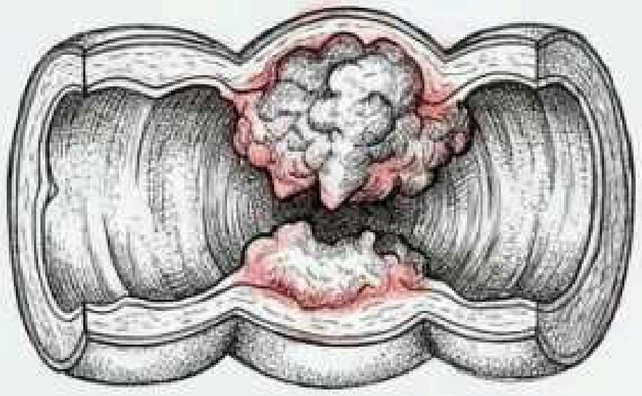
#1 Adhesions (scar tissue bands from previous surgery)

#2 Hernias

Management:

- Often settles with a gastric drain tube + fluids.
- Surgical Trigger: Signs of strangulation (compromised blood supply).

Large Bowel Obstruction

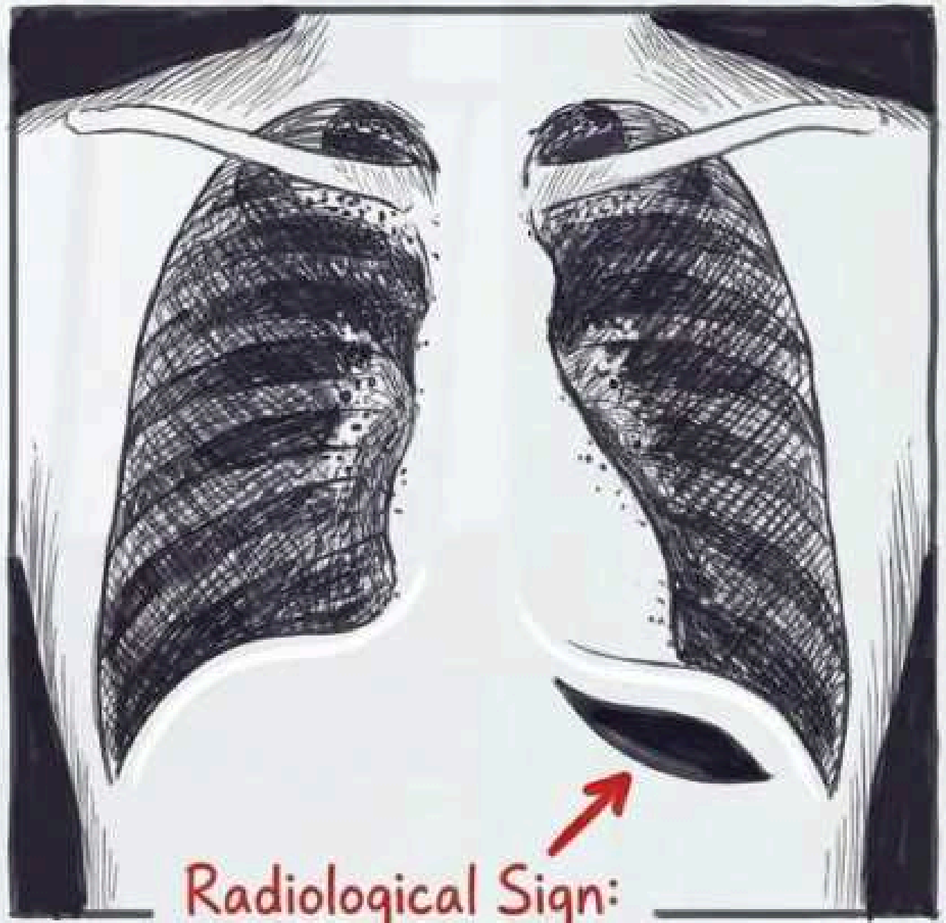


Causes:

#1 Cancer is the commonest cause.

Perforation

¶ 3.7



Radiological Sign:
Free Air

Definition:

A hole in the gut letting contents leak into the abdomen.

Common Culprits:

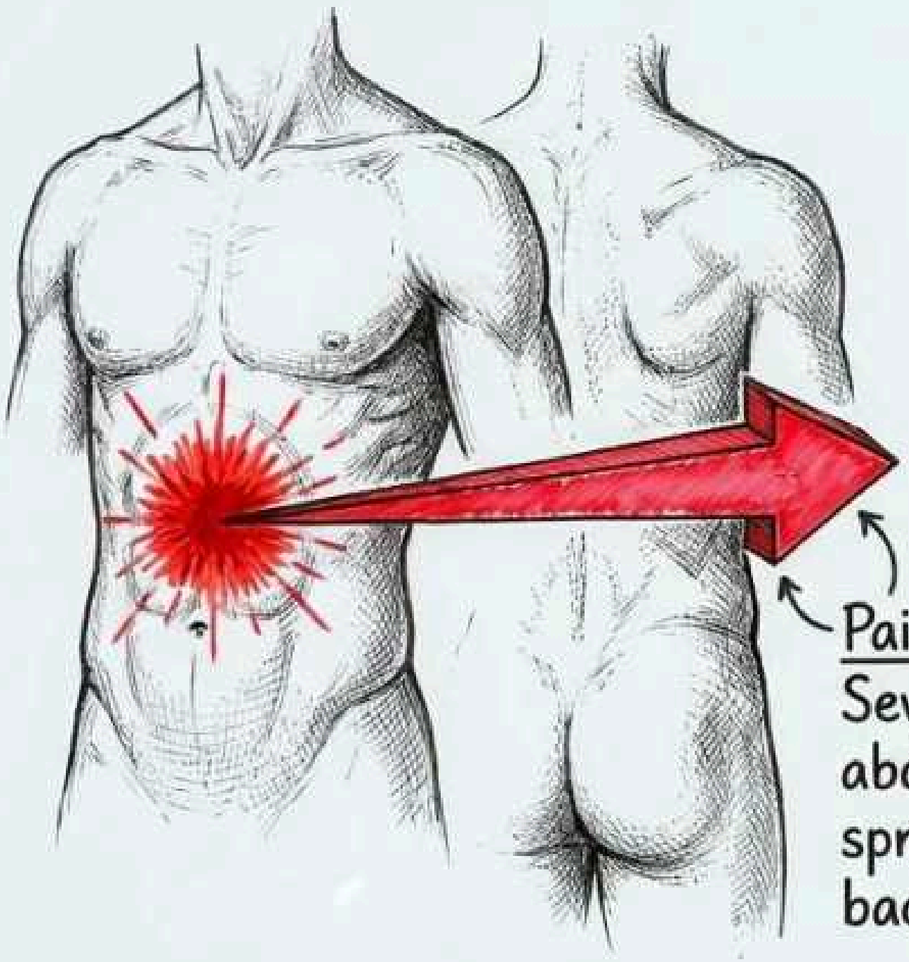
- Perforated Peptic Ulcers (Ref: Med 524 B)
- Perforated Diverticulitis

Management Protocol:

Surgery + Antibiotics + IV Fluids

Acute Pancreatitis

¶ 3.8



Pain Pattern:
Severe upper abdominal pain spreading to the back.

Diagnostic Marker: Raised pancreatic enzymes in the blood.
(Reference: Med 524 B)

NO SURGERY IN MOST CASES

Management:

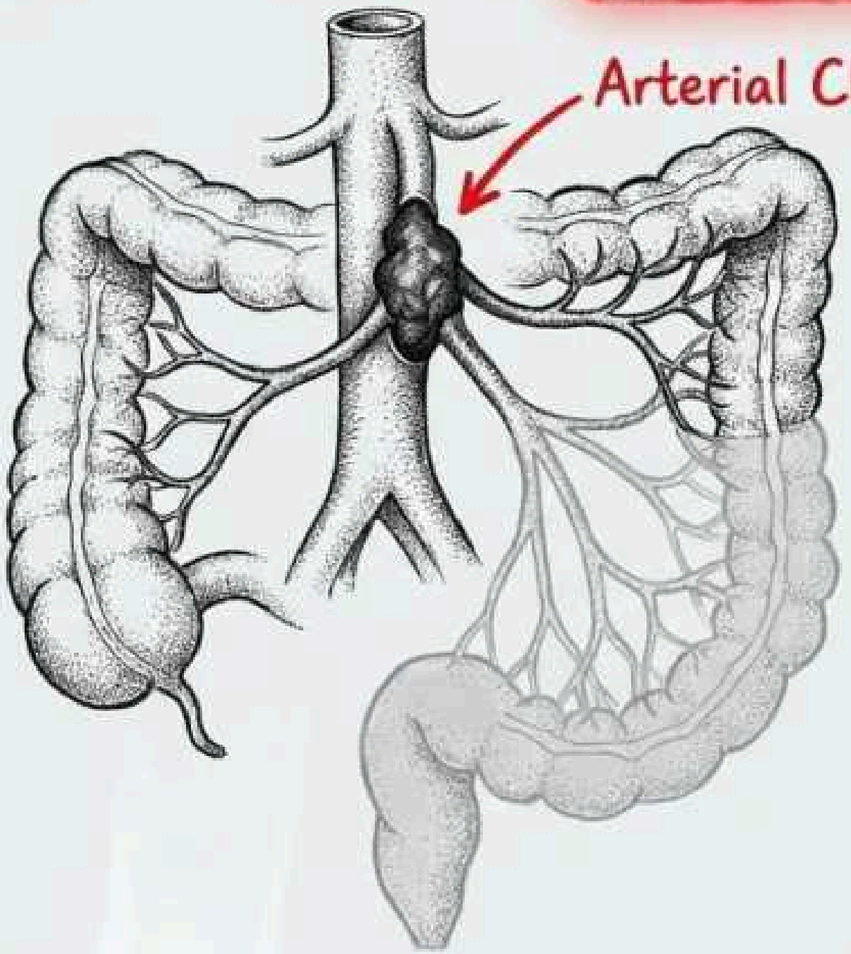
- [ ] IV Fluids
- [ ] Pain relief
- [ ] Nutrition

(Note: Gallstones causing it are removed later).

Mesenteric Ischaemia

¶3.9

Severe pain out of proportion to the findings on examination.



Condition: Loss of blood supply to bowel.

Patient Profile: Older people + Atrial fibrillation or Vascular disease.

Diagnosis: Raised lactate + CT Angiography.

Warning: Rare but often fatal unless recognised early.

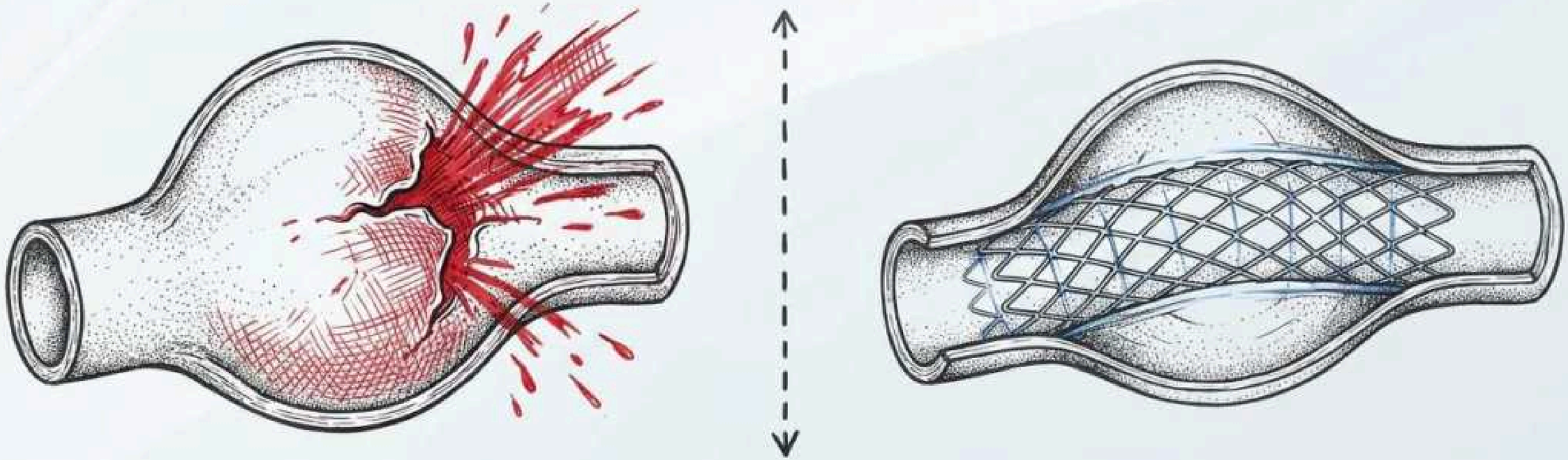
Ruptured Abdominal Aortic Aneurysm (AAA)

¶ 3.10

Ruptured Aneurysm

Before & After

Stent Graft Repair



Presentation

Sudden abdominal or back pain + Collapse. One of the most lethal surgical emergencies.

Classic Profile & Treatment

Older person, often a man who smokes. Needs immediate repair (stent grafts from inside artery).

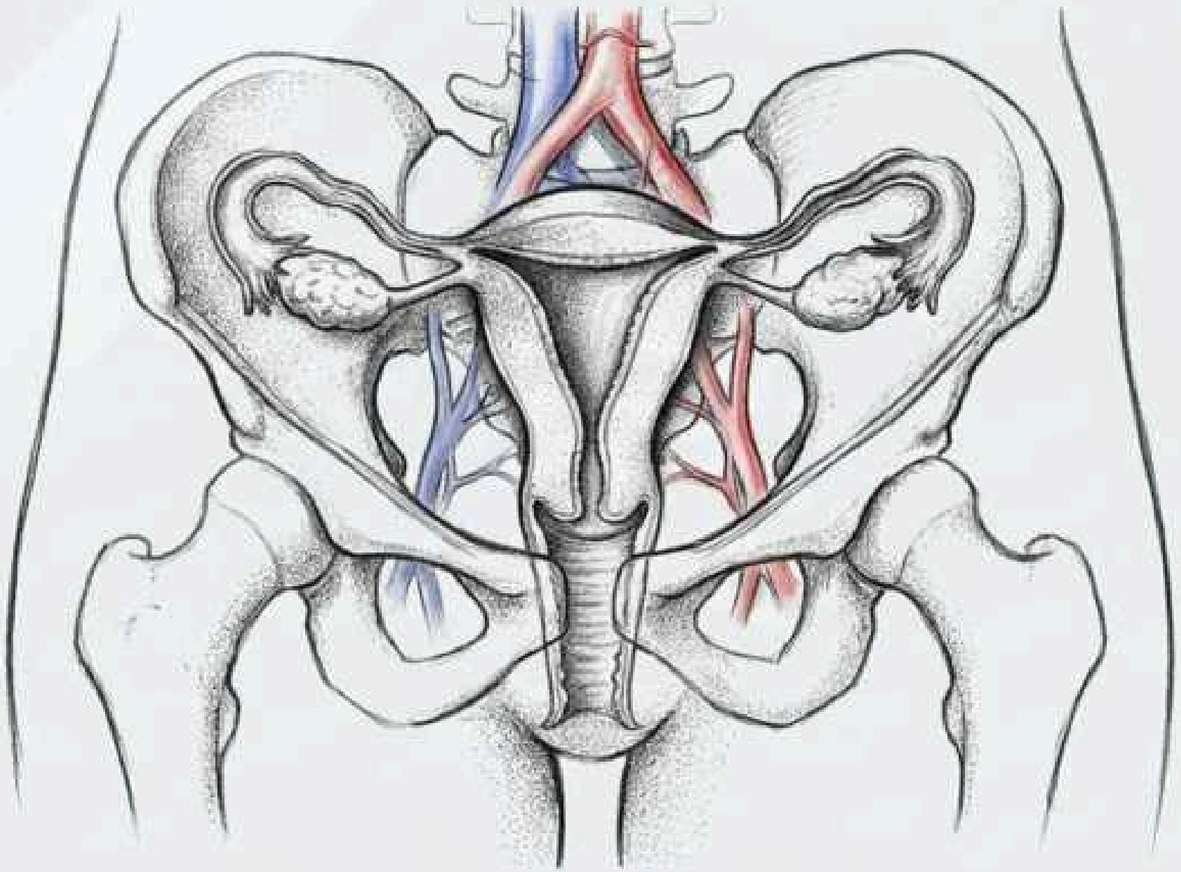
Prevention

Ultrasound screening in older men catches aneurysms before rupture. (Ref: Med 534 B)

Gynaecological Causes

¶ 3.11

The **Golden Rule:** Always consider gynaecological causes of abdominal pain in women of reproductive age.



Key Differentials:

- Ectopic pregnancy (Ref: Med 532 B)
- Ovarian cysts
- Pelvic infection

☑ A pregnancy test is part of the assessment.

Synthesis: The Acute Abdomen

¶ 3.12

Assessment Pillars	The Most Common	The 'Never Miss' Lethal List
• Pain pattern • Peritonitis examination • Blood tests • Imaging	• Appendicitis • Gallstones • Obstruction	• Ischaemia • Ruptured Aneurysm • Ectopic Pregnancy

Next Lecture: Planned surgery & cancer surgery.