Epigastric Pain

- Peptic Ulcer Disease
- GERD
- Pancreatic pain
- Gallbladder and common bile duct obstruction.
- Myocardial Infarction
- AAA- abdominal aortic aneurysm
Right Upper Quadrant Pain

- Acute Cholecystitis and Biliary Colic
- Acute Hepatitis or Abscess
- Hepatomegaly due to CHF
- Perforated Duodenal Ulcer
- Herpes Zoster
- Myocardial Ischemia
- Right Lower Lobe Pneumonia
Left Upper Quadrant Pain

- Acute Pancreatitis
- Gastric ulcer
- Gastritis
- Splenic enlargement, rupture or infarction
- Myocardial ischemia
- Left lower lobe pneumonia
Right lower Quadrant Pain

- Appendicitis
- Regional Enteritis
- Small bowel obstruction
- Ruptured Ectopic Pregnancy
- Twisted Ovarian Cyst
- Ureteral Calculi
- Hernia
Left Lower Quadrant Pain

- Diverticulitis
- Ruptured Ectopic pregnancy
- Twisted Ovarian Cyst
- Ureteral Calculi
- Hernia
- Regional Enteritis
Periumbilical Pain

- Disease of transverse colon
- Gastroenteritis
- Small bowel pain
- Appendicitis
- Early bowel obstruction
Diffuse Pain

- Generalized peritonitis
- Acute Pancreatitis
- Sickle Cell Crisis
- Mesenteric Thrombosis
- Gastroenteritis
- Metabolic disturbances
- Dissecting or Rupturing Aneurysm
- Intestinal Obstruction
- Psychogenic illness
Referred Pain

- Pneumonia (lower lobes)
- Inferior myocardial infarction
- Pulmonary infarction
TYPES OF ABDOMINAL PAIN

- Visceral
  - originates in abdominal organs covered by peritoneum
- Colic
  - crampy pain
- Parietal
  - from irritation of parietal peritoneum
- Referred
  - produced by pathology in one location felt at another location
<table>
<thead>
<tr>
<th></th>
<th>ORGANIC</th>
<th>FUNCTIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain character</td>
<td>Acute, persistent pain increasing in intensity</td>
<td>Less likely to change</td>
</tr>
<tr>
<td>Pain localization</td>
<td>Sharply localized</td>
<td>Various locations</td>
</tr>
<tr>
<td>Pain in relation to sleep</td>
<td>Awakens at night</td>
<td>No affect</td>
</tr>
<tr>
<td>Pain in relation to umbilicus</td>
<td>Further away</td>
<td>At umbilicus</td>
</tr>
<tr>
<td>Associated symptoms</td>
<td>Fever, anorexia, vomiting, wt loss, anemia, elevated ESR</td>
<td>Headache, dizziness, multiple system com-plants</td>
</tr>
<tr>
<td>Psychological stress</td>
<td>None reported</td>
<td>Present</td>
</tr>
</tbody>
</table>
WORK-UP OF ABDOMINAL PAIN

HISTORY
- Onset
- Course
- Duration
- Character of Pain
- Intensity
- Frequency
- Location - Does it go anywhere (referred)?
- Aggravating and relieving factors
- Response to treatment.
- Complications
WORK-UP

PHYSICAL EXAMINATION

- Inspection
- Auscultation
- Percussion
- Palpation
- Guarding - rebound tenderness
- Rectal exam
- Pelvic exam
WORK-UP

LABORATORY TESTS

- CBC; ESR
- Stool....
- Additional depending on rule outs
  - amylase,
  - lipase,
  - LFT’s
WORK-UP

DIAGNOSTIC STUDIES

- Ultrasound
- CT scanning
- Endoscopy UGI
- Sigmoidoscopy, colonoscopy
Common Acute Pain Syndromes

- Appendicitis
- Acute diverticulitis
- Cholecystitis
- Pancreatitis
- Perforation of an ulcer
- Intestinal obstruction
- Ruptured AAA
- Pelvic disorders
APPENDICITIS

- Diagnosis based on history and physical

- Classic sequence of symptoms
  - abdominal pain (begins epigastrium or periumbilical area, )
  - anorexia, nausea or vomiting
  - followed by pain over appendix and
  - low grade fever
DIAGNOSIS

- Physical examination
  - low grade fever
  - McBurney’s point
  - rebound, guarding, +psoas sign

- CBC, HCG
  - WBC range from 10,000-16,000

SURGERY
DIVERTICULITIS

- Results from stagnation of fecal material in single diverticulum leading to pressure necrosis of mucosa and inflammation

- Clinical presentation
  - most pts have h/o diverticula
  - mild to moderate, colicky to steady, aching abdominal pain - usually LLQ
  - may have fever and leukocytosis
PHYSICAL EXAMINATION

- With obstruction bowel sounds hyperactive
- Tenderness over affected section of bowel

DIAGNOSIS

- Often made on clinical grounds
- CBC - ± leukocytosis
MANAGEMENT

• Spontaneous resolution common with low-grade fever, mild leukocytosis, and minimal abdominal pain

• Treat at home with limited physical activity, reducing fluid intake, and oral antibiotics (bactrim DS bid or cipro 500mg bid & flagyl 500 mg tid for 7-14 days)

• Patients who present acutely ill with possible signs of systemic peritonitis, sepsis, and hypovolemic need admission
CHOLECYSTITIS

- Results from obstruction of cystic or common bile duct by large gallstones
- Colicky pain with progression to constant pain in RUQ that may radiate to R scapula
- Physical findings
  - tender to palpation or percussion RUQ
  - may have palpable GB
DIAGNOSIS
• CBC, LFTs (bilirubin, alkaline phosphatase), serum pancreatic enzymes
• Plain abdominal films demonstrate biliary air hepatomegaly, and maybe gallstones
• Ultrasound - considered accurate about 95%

MANAGEMENT
• Admission
PANCREATITIS

- History of cholelithiasis or ETOH abuse
- Pain steady and boring, unrelieved by position change - LUQ with radiation to back - nausea and vomiting,

- Physical findings;
  - acutely ill with abdominal distention, ↓ BS
  - diffuse rebound
  - upper abd may show muscle rigidity
• Diagnostic studies
  - CBC
  - Ultrasound
  - Serum amylase and lipase
    - amylase rises 2-12 hours after onset and returns to normal in 2-3 days
    - lipase is elevated several days after attack
PEPTIC ULCER PERFORATION

- Life-threatening complication of peptic ulcer disease - more common with duodenal than gastric
- Predisposing factors
  - *Helicobacter pylori* infections
  - NSAIDs
  - hypersecretory states
SMALL BOWEL OBSTRUCTION

- Distention $\rightarrow$ $\downarrow$ absorption and $\uparrow$ secretions $\rightarrow$ further distention and fluid and electrolyte imbalance
- Number of causes
- Sudden onset of crampy pain usually in umbilical area of epigastrium - vomiting occurs early with small bowel and late with large bowel
• Physical findings
  - hyperactive, high-pitched BS
  - fecal mass may be palpable
  - abdominal distention
  - empty rectum on digital exam

• Diagnosis
  - CBC
  - serum amylase
  - stool for occult blood
  - abdominal X-ray

• Management
RUPTURED AORTIC ANEURYSM

- AAA is abnormal dilation of abdominal aorta forming aneurysm that may rupture
- More frequent in elderly
- Sudden onset of pain may be felt in chest or abdomen and may radiate to legs and back
• Physical findings
  - appears shocky
  - VS reflect impending shock
  - deficit or difference in femoral pulses

• Diagnosis
  - CT or MRI
  - ECG, cardiac enzymes

SURGICAL EMERGENCY
PELVIC PAIN

- Ectopic pregnancy
- UTI
- Ovarian cysts
Q-Medical causes of acute Abdomen:

Q-Non Surgical causes of acute abdomen.

- * Endocrinal causes.
- * Systemic diseases.
- * Metabolic diseases.
- * GIT disorders.
- * Referred pain.
- * CNS causes.
Endocrine Causes

- 1- Diabetic Ketoacidosis.
- 2- Addisonian Crises.
- 3- Hyperthyroidism.
- 4- Hyperparathyroidism → due to ↑Calcium or Pancreatitis.
Systemic Diseases

1- Collagen Vascular dis.
2- Blood dis (Henoch`s Purpura).
3- Haemolytic dis (Sickle cell dis)
4- Thrombotic state (Acute Leuk).
5- Renal dis $\rightarrow$ Inf.
6- Familial Periodic Fever.
7- Abdominal Migraine.
Metabolic Diseases

1. Heavy metal poisoning (Lead).
2. Narcotic Withdrawal.
3. Familial Hyperlipoproteinemia → Pancreatitis.
4. Food Poisoning.
5. Acute Intermittent Porphyria.
GIT Disorders

1- Acute Gastritis & PU.
2- Acute Cholecystitis.
3- Biliary Colic.
4- Intestinal Colic.
5- Acute Pancreatitis.
- 6- Acute Viral Hepatitis.
- 7- Diverticulitis.
- 8- Peritonitis.
- 9- Enteritis → Typhoid, Staph, Closteridium.
- 10- Ulcerative Colitis.
Referred Pain

* Chest $\rightarrow$ Pleuritis; Pneumonia.
* Heart $\rightarrow$ Pericarditis, MI.
* Abdomen $\rightarrow$ Dissecting Aortic Aneurysm.
CNS

1. Epilepsy.
A Patient with acute Abdominal Pain

- History:
  - Severe → MI.
  - (Sec) Perforated PU.
  - Rupture Aneurysm.
  - Renal, Biliary Colic.
*Rapid & severe over minutes:*
- Acute pancreatitis.
- Complete Int. Obst.
- Mesenteric Thrombus.

*Gradual & Steady over hours:*
- Acute Cholecystitis.
- Acute Appendicitis.
- Diverticulitis.
*Pain Characters*

1- Colicky $\rightarrow$ Hollow organ.
2- Throbbing $\rightarrow$ Pus under tension.
3- Sawing $\rightarrow$ Rh. Pain.
4- Burning $\rightarrow$ PU, GERD.
5- Dull aching → Solid organ Swelling.
6- Stitching → Hepatic Congestion.
7- Heaviness, Dragging → Splenomegaly.
8- Constricting, Tightness, Compressing → IHD.
*Intermittent & Colicky pain:-(Over Hours)

- Early Subacute Pancreatitis.
- Mechanical Small bowel Obst.
CHRONIC PAIN SYNDROMES

- Irritable bowel syndrome
- Chronic pancreatitis
- Diverticulosis
- Gastroesophageal reflux disease (GERD)
- Inflammatory bowel disease
- Duodenal ulcer
- Gastric ulcer