L22: Abdominal pain And IBS

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MEDICINE 433

objectives

1. Differentiate between acute and chronic abdominal pain
2. Differentiate being from life threatening cause
3. Know the types of abdominal pain
4. Know how to approach and manage patients who presents with abdominal pain
5. Know the alarm features of patients who has irritable bowel syndrome

Color index: Slides, Doctor's note , Davidson , Extra Explanation

Acute / Chronic Pain

Acute Abdominal Pain	Chronic Abdominal Pain
Less than 12 weeks	More than 12 weeks
Pain of less than a few days that has worse progressive	Pain that has remained unchanged for months
Pain in a sick or unstable patient	
Two syndromes that constitute urgent surgical referrals are obstruction and peritonitis.(Pain is typically severe in these conditions) intestinal obstruction and usually associated with vomiting peritonitis—> very bad abdominal pain (acute abdomen)	

very important of abdominal pain
*patient with sever epigastric abdominal pain radiated to the back relive when laying forward (pancratitis)
*epigastric pain usually aggravate with hunger (duodenal ulcer)

Ask patients about: 1.Type of pain? 2.Location and radiation
3.Character and Severity 4.Onset (sudden…) and duration
5.Exacerbating or relieving factors
6.Associated symptoms (fever, vomiting…)
7.(Chronological order of symptom onset)
8.Medications (aspirin or NSAIDs)

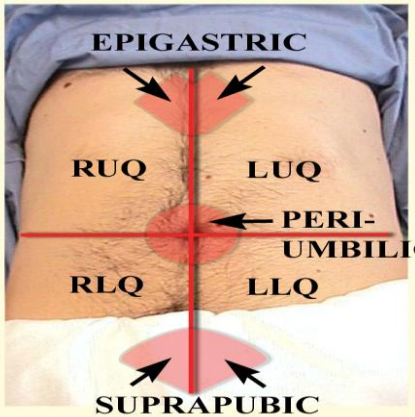
What kind of pain is it?

As the disease progresses visceral pain gives way to signs of parietal pain

As localized peritonitis (inflammation of the peritoneum) develops → rigidity and rebound

Patient with peritonitis lie still

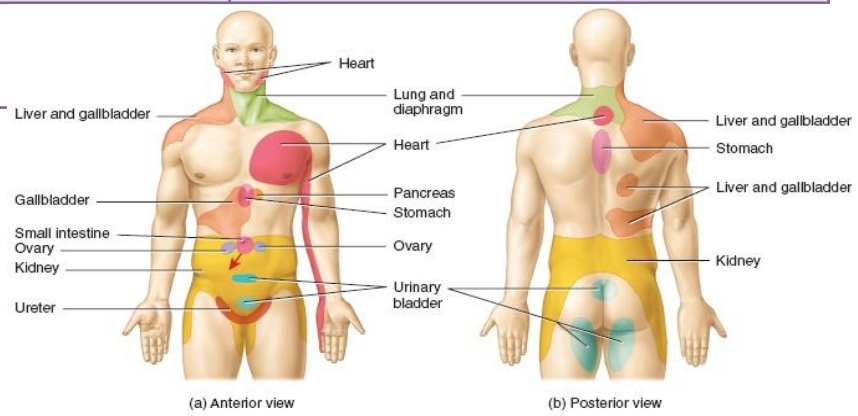
Visceral	Parietal
Involves hollow or solid organs, midline pain due to bilateral innervation	Involves parietal peritoneum
Vague discomfort to excruciating pain	Causes tenderness and guarding which progress to rigidity and rebound as peritonitis develops
Poorly localized	Localized pain in examine patient with abdominal pain :1- any tenderness! (where) 2-is there any guarding! 3- rigidity , 4-rebound tenderness
•Areas: Epigastric region(stomach, duodenum, biliary tract) Periumbilical: (small bowel, appendix, cecum) Suprapubic: (colon, sigmoid, GU tract) appendicitis —-> usually start as Visceral then localise to the right lower quadrant (Parietal).	



Referred pain

- Produces **symptoms** not signs
- Based on developmental embryology

Ureteral obstruction	**testicular pain**
Sub diaphragmatic irritation	ipsilateral shoulder pain
Gynecologic pathology	back or proximal lower extremity
Biliary disease	right infra scapular pain
MI	



Advanced age = increased risk of nasty

Pain first is worst –more likely to be caused by surgical disease

Pain for less than 48 hours more likely to have a surgical cause - lo

Constant pain more likely to be serious than intermittent

First episode more likely to be something bad

Abs and steroids mask infection

Vascular history etc – consider mesenteric ischaemia or AAA

diverticulosis—> sever left lower quadrant pain , Fever , and has high blood count —> surgical

Psychogenic Pain

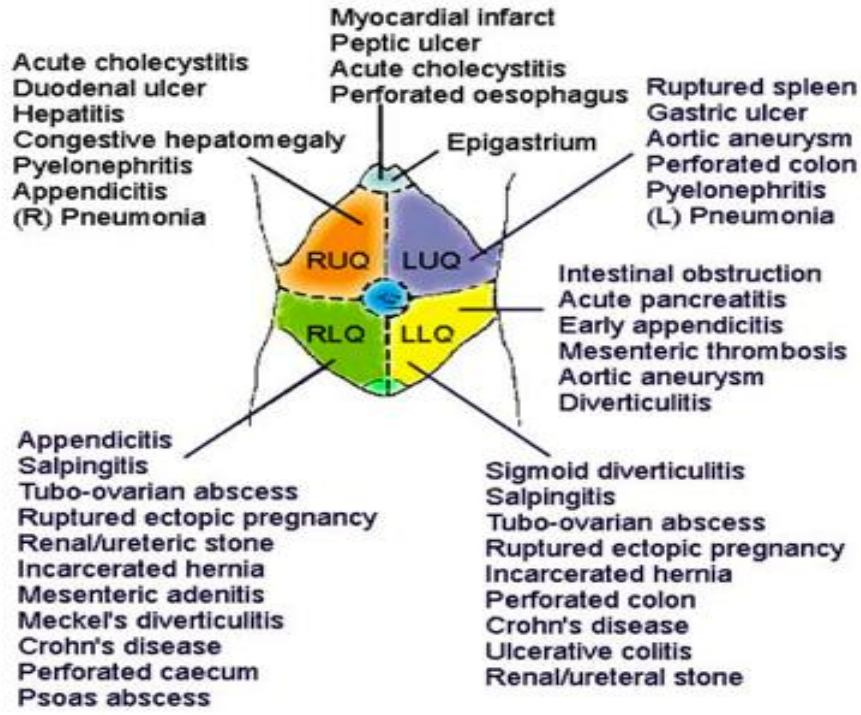
- Patient may come complaining of pain with no organic cause found on investigations.
- Cause can be attributed to underlying psychological disorder.

Physical Examination

- **General and Vital Signs**
- **Guarding**
  - Voluntary
    - Diminish by having patient flex knees
  - Involuntary
    - Reflex spasm of abdominal muscles
- **Rigidity**
- **Rebound** (can be normal in 25%)
- **Suggests peritoneal irritation**

Orthostatic VS are less reliable in the diabetic, elderly, those on beta-blocker. Pulse increase of 30 or presyncope on standing are highly sensitive for loss of 1 L of blood or 3L of fluid. BP changes are less reliable. Patient must be standing at least one minute before measurements are taken.

Differential Diagnosis



Labs

- CBC
- LFT
- Renal function
- Urinenalysis -it may cause hematurea or to rule out renal stone
- X-ray -Any abdominal pain YOU HAVE TO do X-ray —> to see obstruction (air fluid level) or perfulation
- US abdomen
- Ct scan

Chronic Abdominal Pain

Chronic abdominal pain is a common complaint, and the vast majority of patients will have a **functional** disorder, most commonly the irritable bowel syndrome

Differential diagnosis

IBS	Pancreatic cancer	PUD(Peptic ulcer disease)
IBD	Celiac disease	Gastric/ small or large bowel cancer
Reflux disease	Functional dyspepsia	

alarm features if see it it's not functional
usually functional pain not wake patient from sleep

Features that suggest organic illness include:

- ✓Unstable vital signs.
- ✓Weight loss.
- ✓Fever.
- ✓Dehydration.
- ✓Electrolyte abnormalities.
- ✓Symptoms or signs of gastrointestinal blood loss or anemia.
- ✓Signs of malnutrition.

Investigations for Chronic and Recurrent Abdominal Pain

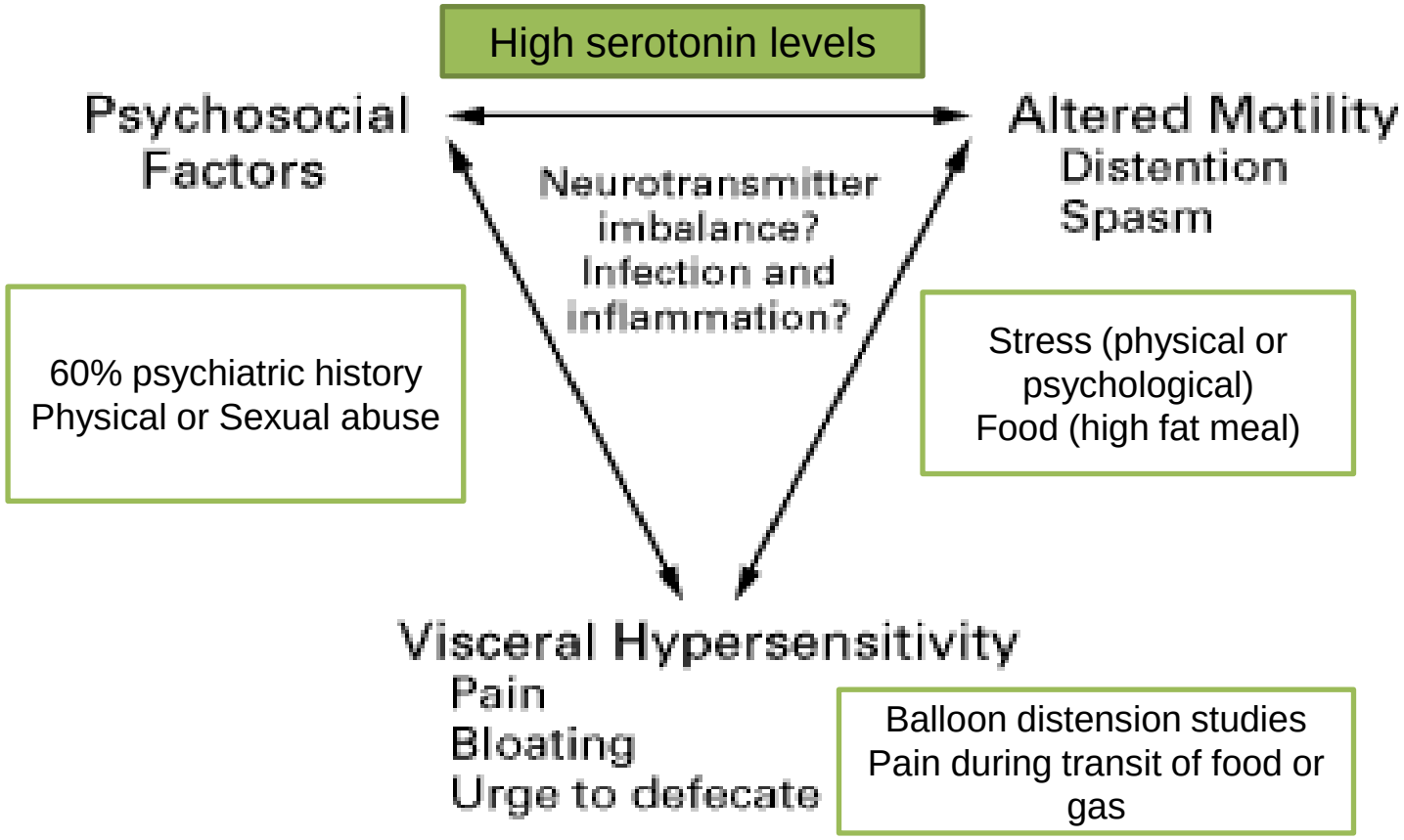
Investigation type	Symptoms	Differential Diagnosis
Endoscopy and Ultrasound	Epigastric pain and dyspepsia	Gall bladder disease
Colonoscopy	Altered bowel habits Rectal bleeding Suspicion of obstruction	Colonic diseases
Angiography	Patients with widespread atherosclerosis	Mesentric ischemia
Ultrasound CT Faecal Elastase	Upper abdominal pain radiating to the back. Weight loss. History of alcohol use.	Chronic/Acute pancreatitis Pancreatic Cancer
No need for investigations	Psychiatric disturbances	Functional disorder

Irritable bowel syndrome (IBS)

- IBS refers to an idiopathic disorder associated with an intrinsic bowel motility dysfunction that affects up to 20% of adults
- Young women are 2-3 times more affected than men.
- IBS is a chronic continuous or remittent functional GI illness
- Psychiatric symptoms often precede bowel symptoms (depression, anxiety,)
- Symptoms that are exacerbated by eating and stress
- All laboratory test results are **normal**, and no mucosal lesions are found on sigmoidoscopy.

any patient above 40 present with first IBS you put (??) and look if there's any alarm female usually more than male

Pathophysiology



- **Infections and allergies can play a role in developing IBS.**
- **7-32% of patients develop IBS after gastroenteritis.**

Symptoms of IBS

- Abnormal stool frequency (>3 BM/day or <3BM/ week.
- Abnormal stool form (lumpy/hard or loose/watery)
- Abnormal stool passage (straining, urgency or feeling of incomplete evacuation)
- Cramping abdominal pain (relieved by defecation)—location varies widely, but sigmoid colon is the common location of pain
- Bloating or feeling of abdominal distention
- Passage of mucus
- Bloating or feeling of abdominal distension.
- they may complain of extra GI symptoms as dizziness , anxiety

Diagnosis

- Need a very good history (Rome 3 criteria + other clinical features suggestive of IBS).
- Ask about Alarm symptoms that suggest other serious diseases (to exclude them).

Those symptoms are :

1. PR bleeding
2. Weight loss
3. Family history of cancer
4. Fever
5. Anemia,Onset >45 years of age
6. Progressive deterioration
7. Steatorrhea
8. dehydration

+ basic lab (CBC , C reactive protien ,
+ (ALT ,alkaline phosphate)—> to make sure is not liver
+ ulterasound
+ endoscopy —> if there's alarm feature or patient above 40

Rome III diagnostic criteria* for irritable bowel syndrome

Recurrent abdominal pain or discomfort• at least 3 days per month in the last 3 months associated with 2 or more of the following:
(1) Improvement with defecation
(2) Onset associated with a change in frequency of stool
(3) Onset associated with a change in form (appearance) of stool

* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis.
• Discomfort means an uncomfortable sensation not described as pain. In pathophysiology research and clinical trials, a pain/discomfort frequency of at least 2 days a week during screening evaluation for subject eligibility.
Reproduced with permission from: Longstreth GF, Thompson WG, Chey WD, et al. Functional bowel disorders. Gastroenterology 2006; 130:1480.

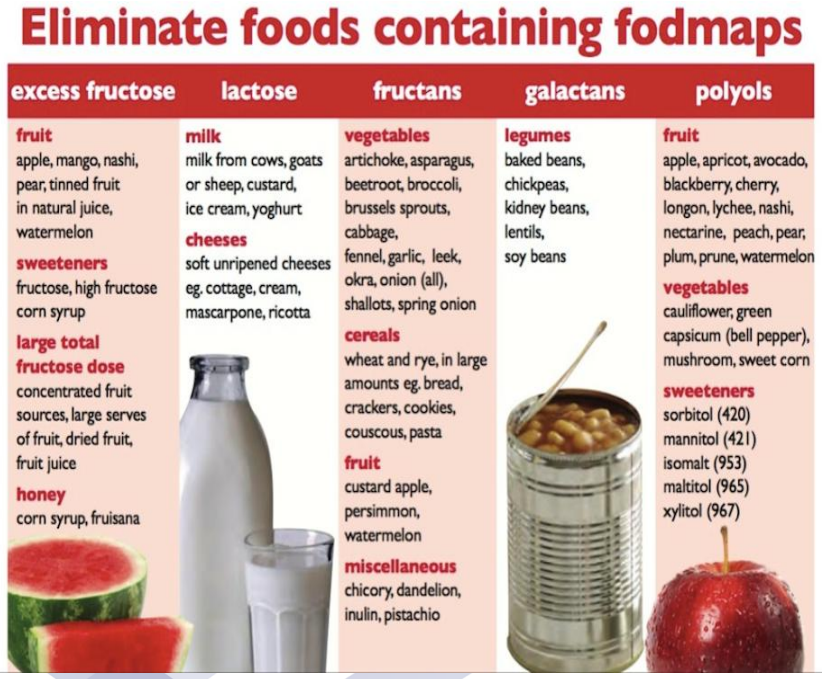
Diagnosis

- Diarrhea predominant patients are justified to go through investigations to rule out the following:
  - Microscopic colitis
  - Lactose intolerance
  - Bile acid malabsorption
  - Celiac disease
  - Thyrotoxicosis

Management

- There is no cure, **but** effective management may lessen the symptoms.
- The therapeutic attitude of the physician during the first interview is of paramount importance.
- He should acknowledge the distress caused by the illness.
- Build an atmosphere of confidence and trust.
- Allow sufficient time.
- Explain to patient that he does not have a serious disease, however he has a chronic illness characterized by “sensitive gut” which can reacts excessively to food and mood.
- Psychological therapies can be

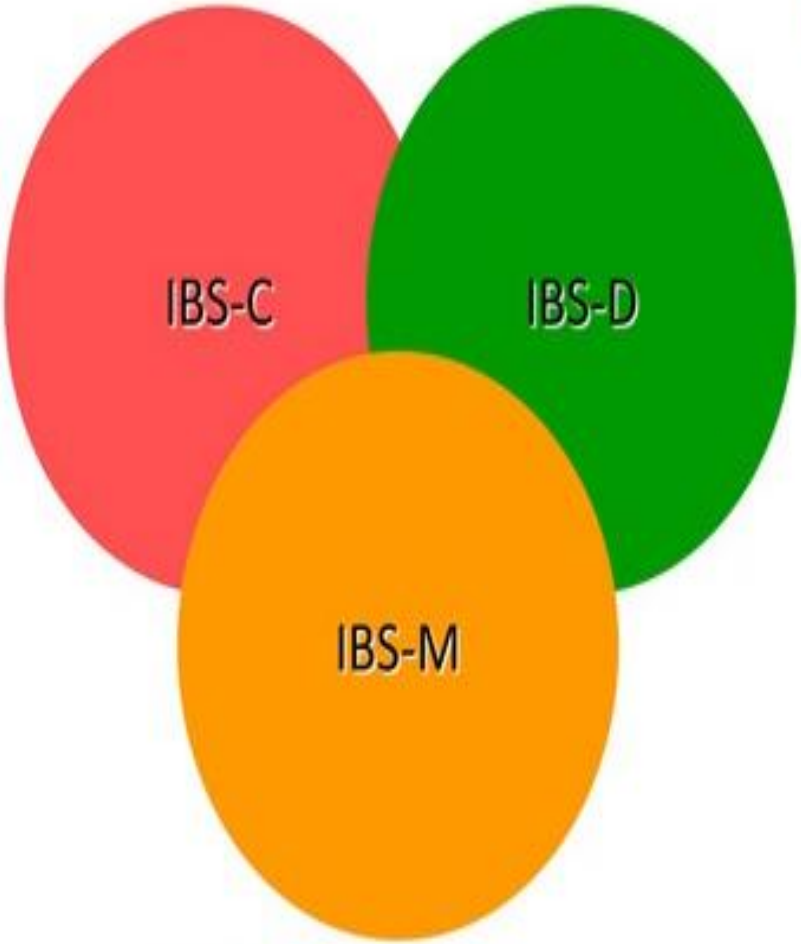
Considered for difficult cases.



they may possible caused and patient should avoid them if feel any discomfort after ate them.

IBS-C

- Linaclotide*
- Lubiprostone*
- CBT/Hypnotherapy
- Diet Modification
- SSRIs
- Probiotics
- Elobixibat



IBS-D

CBT/Hypnotherapy
Diet Modification
Rifaximin*
TCAs
Serum-Derived Bovine Immunoglobulin*
Eluxadoline*
Alosetron*
Probiotics
Peppermint Oil

- IBS-M

CBT/Hypnotherapy

Case 1

24 year healthy Male with one day hx of abdominal pain.

Pain was generalized at first, now worse in right lower abd & radiates to his right groin.

He has vomited twice today.

Denies any diarrhea, fever, dysuria or other complaints

T: 37.8, HR: 95, BP 118/76,

Uncomfortable appearing, slightly pale

Abdomen: soft, non-distended, tender to palpation in RLQ with mild guarding; hypoactive bowel sounds

What is your differential diagnosis?

acute appendicitis

Case 2

46 year old Male with hx of alcohol abuse with 3 days of severe upper abd pain, vomiting, subjective fevers.

The vital signs: T: 37.4, HR: 115, BP: 98/65.

Abdomen mildly distended, moderately epigastric tenderness and voluntary guarding

What is your differential diagnosis & what next?

acute pancreatitis / management in general most important is hydration and give pain killer ,usually no need for surgery.

❖ Risk factor and clinical features of pancreatitis:

Risk Factors:	Clinical Features:
Alcohol Gallstones Drugs diuretics, NSAIDs Severe hyperlipidemia	Epigastric pain Radiates to back Severe N/V

Case 3

72 year old Male with hx of CAD on aspirin and Plavix with several days of dull upper abdominal pain and now with worsening pain "in entire abdomen" today. Some relief with food until today, now worse after eating lunch.

T: 99.1, HR: 70, BP: 90/45, R: 22

Abdominal mildly distended and diffusely tender to palpation, +rebound and guarding

What is your differential diagnosis & what next?

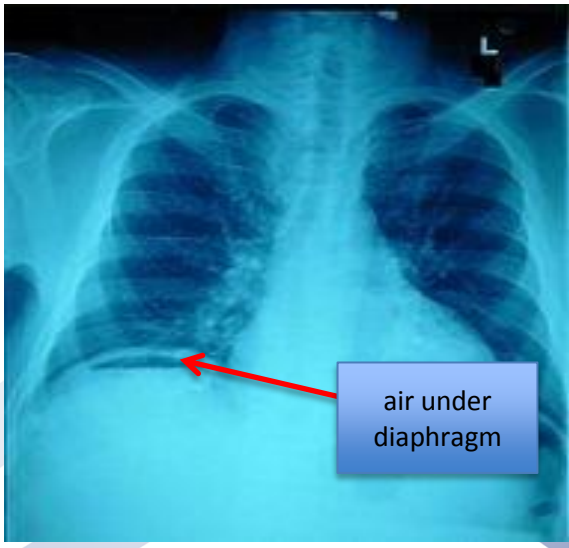
peptic ulcer then perforated / management of this patient

(admit patient , IV fluid , antibiotic and go to surgery)

Is it Visceral or parietal?

At the beginning was parietal and then changed to visceral

Risk Factors	Clinical Features	Physical Findings
1) H. pylori 2) NSAIDs	A. Burning epigastric pain B. Sharp, dull, achy, or "empty" or "hungry" feeling C. Relieved by milk, food, or antacids D. Awakens the patient at night	A. Epigastric tenderness B. Severe, generalized pain may indicate perforation with peritonitis

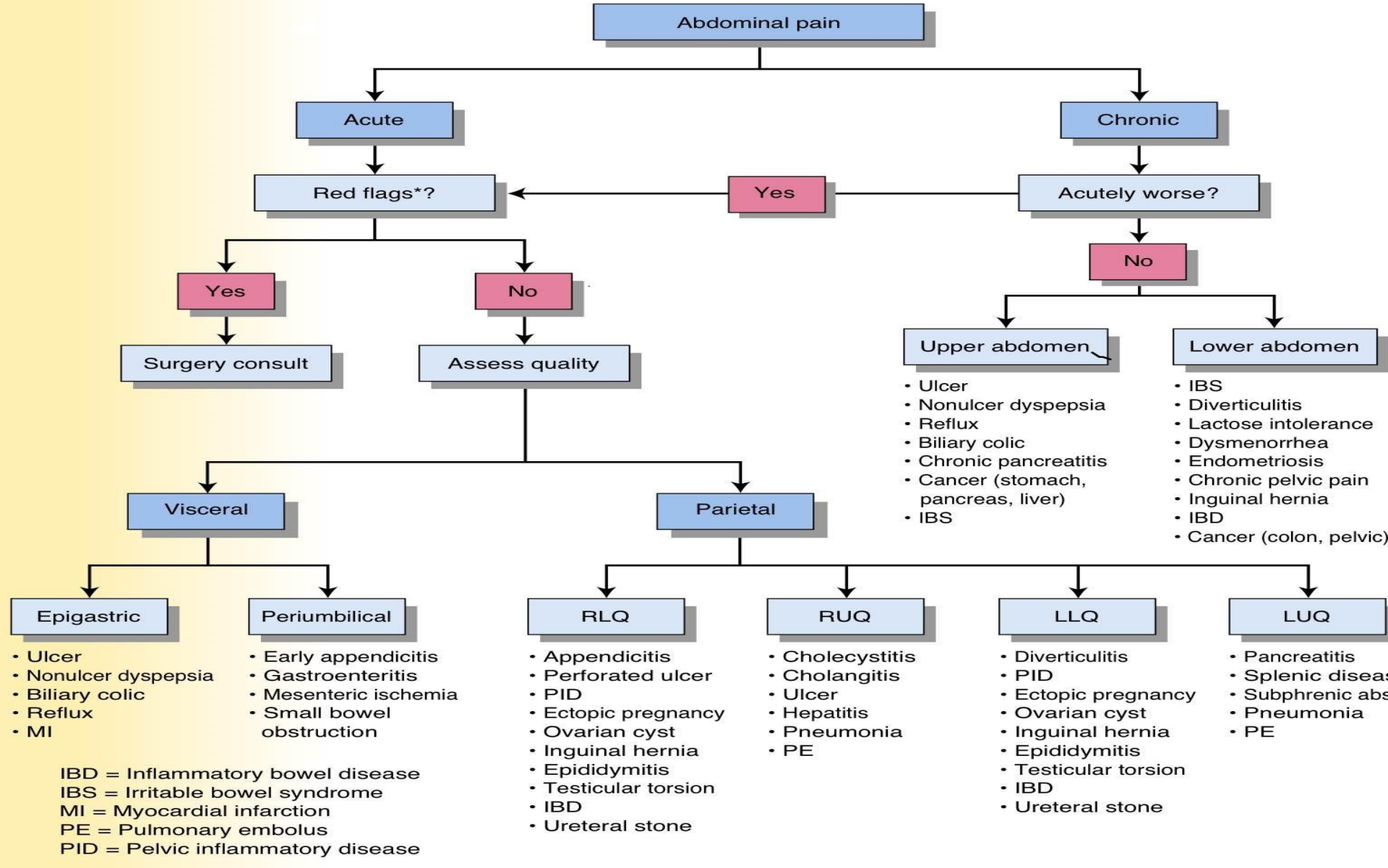


Case 4

23 year old female medical students Presented with 2 years h/o intermittent left lower quadrant abdominal pain which is usually relieved by defecation and associated with constipation and abdominal bloating.

What else you need?
CBC, US, Colonoscopy
Is it Acute or chronic?
Chronic
Is it Visceral or parietal?
Parietal

FIGURE 3-10 **Approach to the diagnosis of nontraumatic abdominal pain in adults.**



(Adapted from Sloane PD, Slatt LM, Ebell MH, et al. *Essentials of Family Medicine*. 4th ed. Philadelphia, PA: Lippincott Williams & Wilkins, 2002:245, Figure 16.2.)

Irritable Bowel Syndrome

A. General characteristics

1. IBS refers to an idiopathic disorder associated with an intrinsic bowel motility dysfunction (abnormal resting activity of GI tract) that affects 10% to 15% of all adults.
2. Common associated findings include depression, anxiety, and somatization. Psychiatric symptoms often precede bowel symptoms. **Symptoms are exacerbated by stress and irritants in the intestinal lumen.**
3. All laboratory test results are normal, and no mucosal lesions are found on sigmoidoscopy. IBS is a benign condition and has a favorable long-term prognosis.
4. Symptoms should be present for **at least 3 months** to diagnose IBS.

B. Clinical features

1. Change in frequency/consistency of stool—diarrhea, constipation (or alternating diarrhea and constipation)
2. Cramping abdominal pain (relieved by defecation)—location varies widely, but sigmoid colon is the common location of pain
3. Bloating or feeling of abdominal distention

C. Diagnosis

1. This is a clinical diagnosis, and a diagnosis of exclusion.
2. Initial tests that may help exclude other causes include CBC, renal panel, fecal occult blood test, stool examination for ova and parasites, erythrocyte sedimentation rate, and possibly a flexible sigmoidoscopy. Order these tests only if there is suspicion of other causes for the symptoms.

D. Treatment

1. Usually, no specific treatment is necessary. Manage the symptoms below as indicated:
   a. Diarrhea—diphenoxylate, loperamide
   b. Constipation—Colace, psyllium, cisapride
2. The following may help: avoid dairy products, avoid excessive caffeine.
3. Tegaserod maleate (Zelnorm) is a serotonin agonist recently introduced for the treatment of IBS. In a short-term study, it improved abdominal pain, bloating, and constipation in women.

summary

- Pain awakening the patient from sleep should always be considered significant.
- Pain almost always precedes vomiting in surgical causes; converse is true for most gastroenteritis and NSAP
- Exclude life threatening pathology
- BHCG in female of child bearing age
- Initial workup of chronic abdominal pain should be focused on differentiating benign functional illness from organic pathology.
- Features that suggest organic illness include unstable vital signs, weight loss, fever, dehydration, electrolyte abnormalities, symptoms or signs of gastrointestinal blood loss, anemia, or signs of malnutrition.
- For free air – instill 500cc of air into stomach via NGT and repeat xray or do noncontrast CT scan

MCQs

1.28 years old patient complains of upper abdominal pain that radiates to the back, hematemesis and nausea for one week. The pain gets aggravated when the patient eats food. There was history of Helicobacter pylori infection. What's the most appropriate diagnosis?

A. Acute pancreatitis
B. Peptic ulcer disease
C. Cholecystitis
D. Gastritis

2.34 year old anorexic patient complains of right lower quadrant pain, fever, nausea and vomiting for eight days. Some laboratory findings indicates leukocytosis. What's the most appropriate diagnosis?

A. Acute appendicitis
B. Peptic ulcer disease
C. Cholecystitis
D. Acute pancreatitis

3.41 year old patient complains of severe epigastric pain and vomiting. The pain gets relieved by bending forward. There was history of alcohol abuse. What's the most appropriate diagnosis?

A. Acute pancreatits
B. Cholecystitis
C. Appendicitis
D. Gastritis

4.23 year old female patient complains of left lower quadrant pain, constipation and bloating that persisted with her for one year. The pain is usually relieved by defecation. What's the most appropriate diagnosis?

A. Ulcerative colitis
B. Irritable bowel syndrome
C. Diverticulitis
D. Gastritis

5.Which one of these is the diagnostic criteria for IBS?

A.Rome lll
B.Duke classification
C.Rockall score
D.Glasgow-Blatchford score

Answers : 1-B 2-A 3-A 4-B 5-A

DONE BY

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Medicine is a science of uncertainty and an art of probability