Lecture.5 PRESENTING PROBLEMS In GASTROINTESTINAL DISEASE

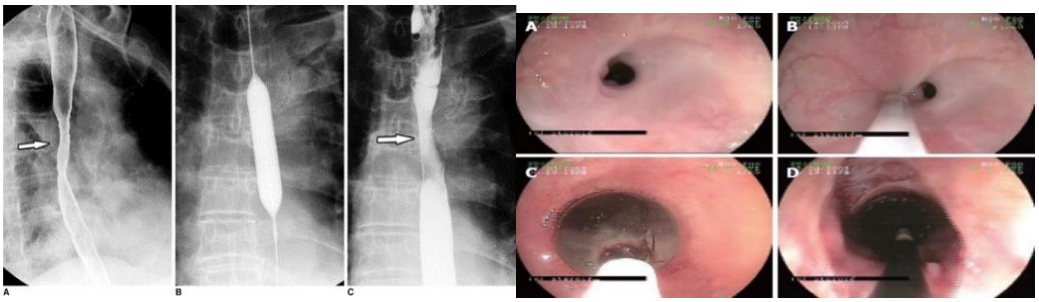
Dysphagia

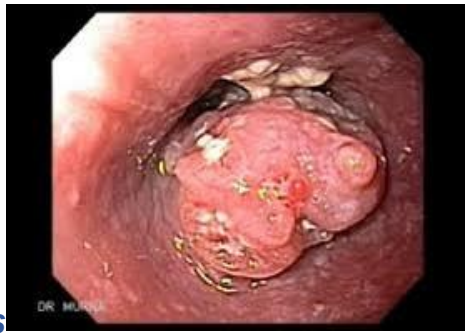
Dysphagia is defined as difficulty in swallowing.

It may coexist with heartburn or vomiting but should be distinguished from both *globus sensation* (in which anxious people feel a lump in the throat without organic cause) and *odynophagia* (pain during swallowing, usually from gastro-esophageal reflux or candidiasis).

Dysphagia can occur due to problems in the *oropharynx or esophagus.*

- Oropharyngeal disorders affect the initiation of swallowing at the pharynx and upper esophageal sphincter.
- The patient has difficulty initiating swallowing and complains of choking, nasal regurgitation or tracheal aspiration. Drooling, dysarthria, hoarseness and cranial nerve or other neurological signs may be present.
- *Esophageal dysphagia* disorders cause dysphagia by obstructing the lumen or by affecting motility. Patients with esophageal disease complain of food 'sticking' after swallowing.





Dysphagia : Investigations

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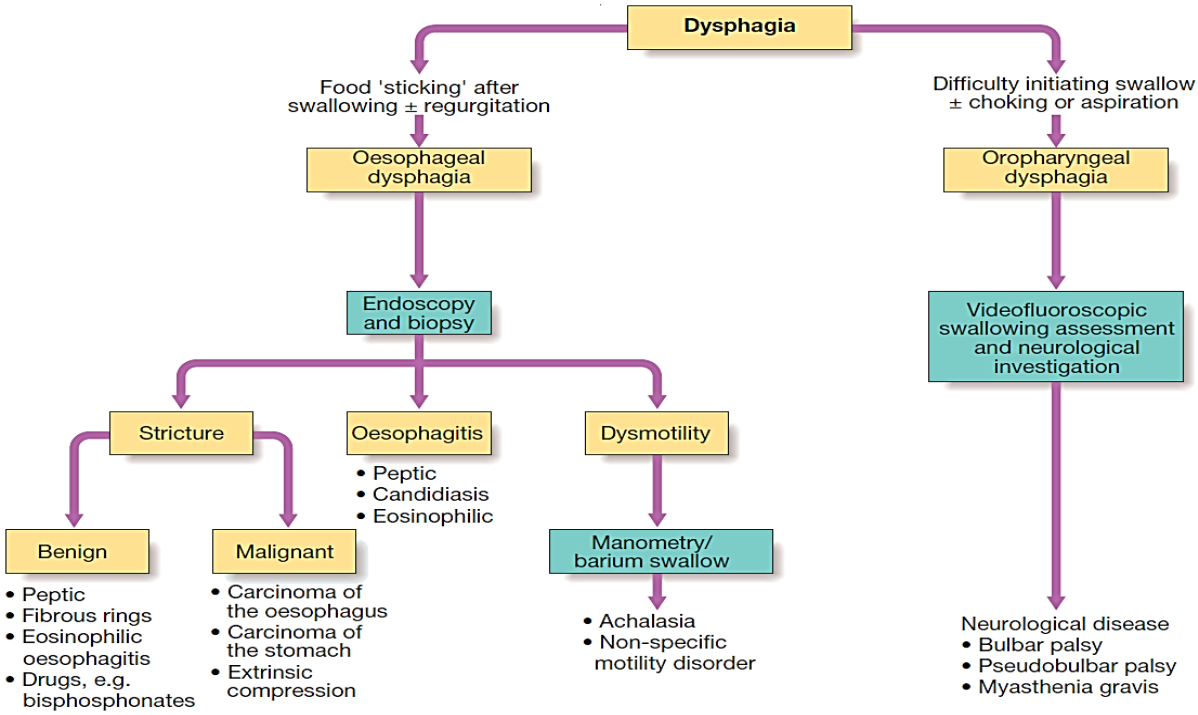


- Dysphagia should always be investigated urgently. Endoscopy is the investigation of choice because it allows biopsy and dilatation of strictures.
- Even if the appearances are normal, biopsies should be taken .
- If no abnormality is found, then barium swallow with video -fluoroscopic swallowing assessment is indicated to detect major motility disorders.
- Dyspepsia describes symptoms such as discomfort, bloating and nausea, which are thought to originate from the upper gastrointestinal tract.

22.14 Causes of dyspepsia

Upper gastrointestinal disorders	
• Peptic ulcer disease • Acute gastritis • Gallstones	• Oesophageal spasm • Non-ulcer dyspepsia • Irritable bowel syndrome
Other gastrointestinal disorders	
• Pancreatic disease (cancer, chronic pancreatitis) • Colonic carcinoma	• Hepatic disease (hepatitis, metastases)
Systemic disease	
• Renal failure	• Hypercalcaemia
Drugs	
• Non-steroidal anti-inflammatory drugs (NSAIDs) • Corticosteroids	• Iron and potassium supplements • Digoxin
Others	
• Psychological (anxiety, depression)	• Alcohol

- People who present with new dyspepsia at an age of more than 55 years and younger patients unresponsive to empirical treatment require investigation to exclude serious disease.

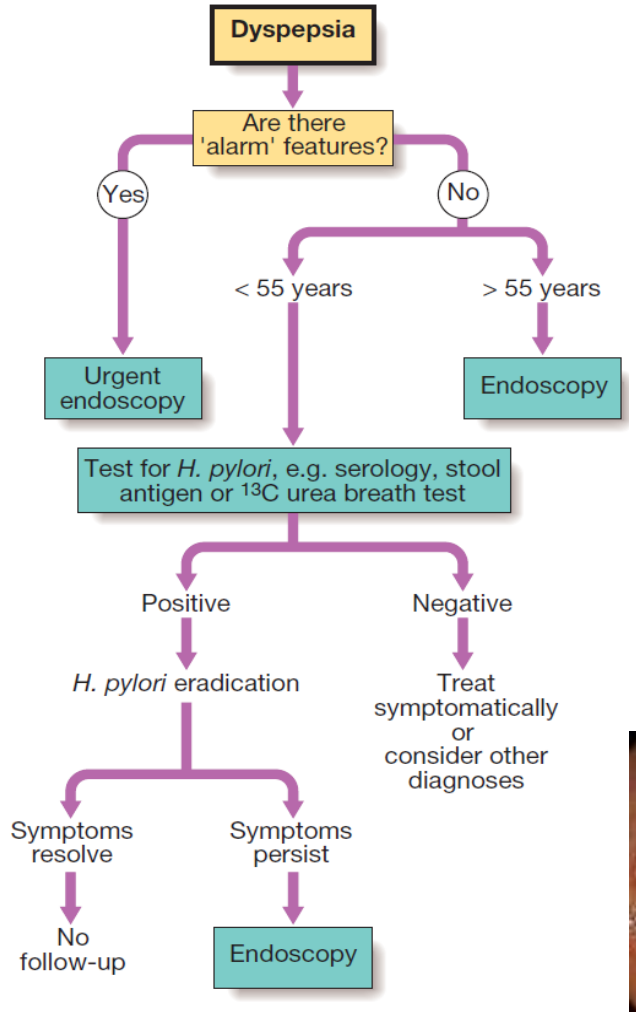
Notes...

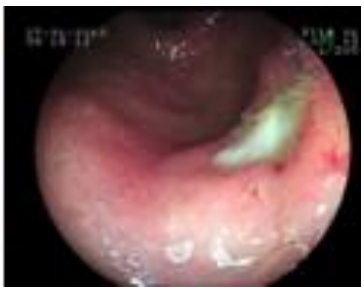
- Although symptoms often correlate poorly with the underlying diagnosis, a careful history is important to detect 'alarm' features requiring urgent investigation and to detect atypical symptoms which might be due to problems outside the gastrointestinal tract.

22.15 Alarm features in dyspepsia

- Weight loss
- Anaemia
- Vomiting
- Haematemesis and/or melaena
- Dysphagia
- Palpable abdominal mass

- Patients who present with new dyspepsia at an age of more than 55 years and younger patients unresponsive to empirical treatment require investigation to exclude serious disease.





Heartburn and regurgitation

- Heartburn describes retrosternal, burning discomfort, often rising up into the chest and sometimes accompanied by regurgitation of acidic or bitter fluid into the throat. These symptoms often occur after meals, on lying down or with bending, straining or heavy lifting. They are classical symptoms of gastro-oesophageal reflux but up

Notes...

to 50% of patients present with other symptoms, such as chest pain, belching, halitosis, chronic cough or sore throats.

- In young patients with typical symptoms and a good response to dietary changes, antacids or acid suppression investigation is not required, but in patients over 55 years of age and those with alarm symptoms or atypical features urgent endoscopy is necessary.

Vomiting

- Vomiting is a complex reflex involving both autonomic and somatic neural pathways. Synchronous contraction of the diaphragm, intercostal muscles and abdominal muscles raises intra-abdominal pressure and, combined with relaxation of the lower esophageal sphincter, results in forcible ejection of gastric contents.
- It is important to distinguish true vomiting from regurgitation and to elicit whether the vomiting is acute or chronic (recurrent), as the underlying causes may differ.

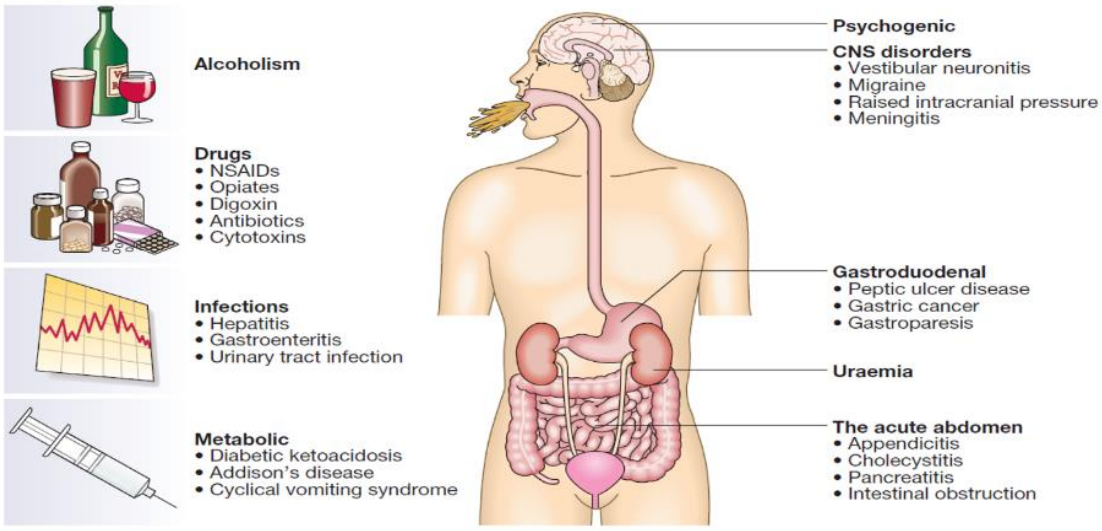
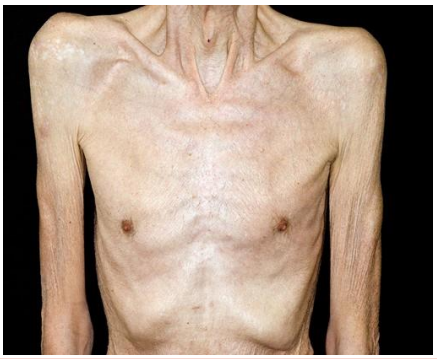


Fig. 22.17 Causes of vomiting.

Weight loss

- Weight loss may be physiological, due to dieting, exercise, starvation, or the decreased nutritional intake which accompanies old age.
- Weight loss of more than 3 kg over 6 months is significant and often indicates the presence of an underlying disease.



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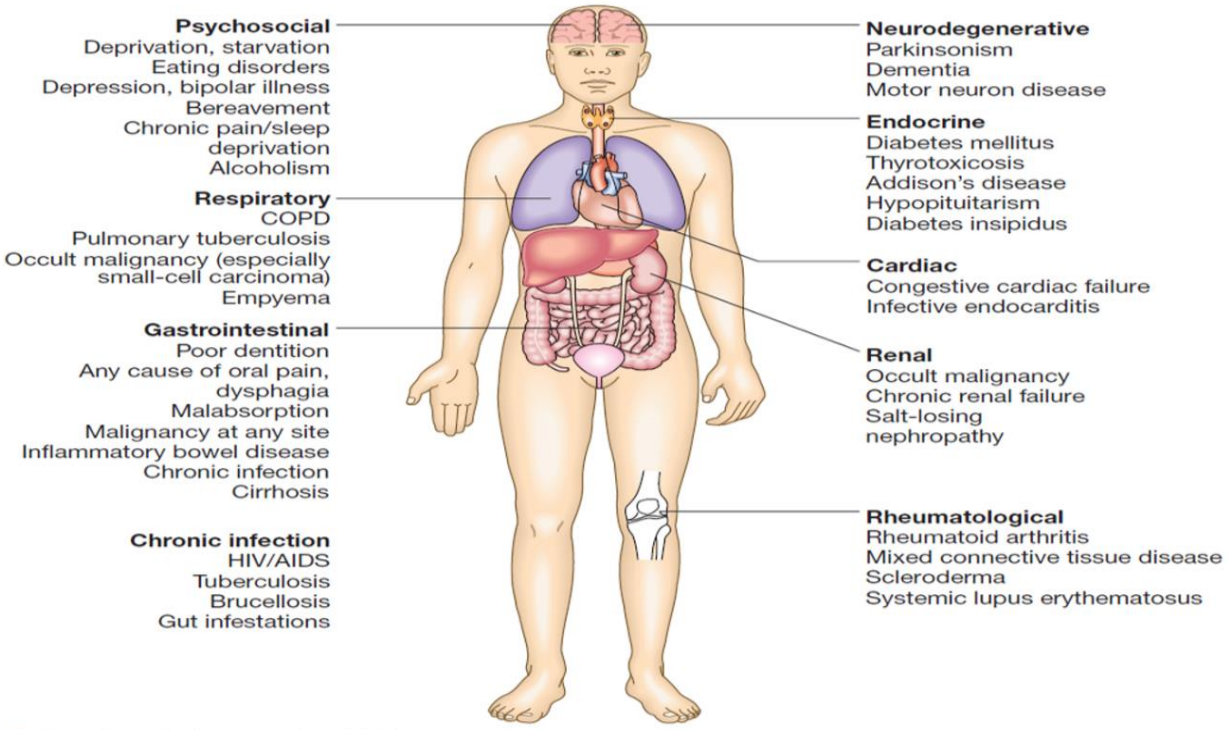

Fig. 22.23 Some important causes of weight loss.

22.23 Some easily overlooked causes of unexplained weight loss

- Depression/anxiety
- Chronic pain or sleep deprivation
- Psychosocial deprivation/malnutrition in the elderly
- Existing conditions (severe chronic obstructive pulmonary disease, cardiac failure)
- Diabetes mellitus/hyperthyroidism
- Occult malignancy
- Anorexia nervosa in atypical groups
- Addison's disease/panhypopituitarism

Diarrhea

- Diarrhea is defined as the passage of more than 200 g of stool daily, and measurement of stool volume is helpful in confirming this. The most severe symptom in many patients is urgency of defecation, and fecal incontinence is a common event in acute and chronic diarrheal illnesses.

Acute diarrhea

- This is extremely common and is usually due to feco oral transmission of bacteria or their toxins, viruses or parasites .
- Infective diarrhea is usually short lived and patients who present with a history of diarrhea lasting more than 10 days rarely have an infective cause.

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Chronic or relapsing diarrhea

22.21 Chronic or relapsing diarrhoea

	Colonic	Malabsorption	Small bowel
Clinical features	Blood and mucus in stool Cramping lower abdominal pain	Steatorrhoea Undigested food in the stool Weight loss and nutritional disturbances	Large-volume, watery stool Abdominal bloating Cramping mid-abdominal pain
Some causes	Inflammatory bowel disease Microscopic colitis Neoplasia Ischaemia Irritable bowel syndrome	Pancreatic Chronic pancreatitis Cancer of pancreas Cystic fibrosis Enteropathy Coeliac disease Tropical sprue Lymphoma Lymphangiectasia	Crohn's disease VIPoma Drug-induced NSAIDs Aminosalicylates Selective serotonin re-uptake inhibitors (SSRIs)
Investigations	Faecal calprotectin Ileocolonoscopy with biopsies	Faecal elastase Ultrasound, CT and MRCP Small-bowel biopsy Barium follow-through or small-bowel MRI	Faecal calprotectin Stool volume Gut hormone profile Barium follow-through or small-bowel MRI

steatorrhea

Bulky, pale and offensive stools which float in the toilet . it signify fat malabsorption. Abdominal distension, borborygmi, cramps, weight loss and undigested food in the stool may be present. Some patients complain only of malaise and lethargy.

Constipation

Constipation is defined as infrequent passage of hard stools. Patients may also complain of straining, a sensation of incomplete evacuation and either perianal or abdominal discomfort. Constipation may occur in many gastrointestinal and other medical disorders.

22.24 Causes of constipation

Gastrointestinal disorders

Dietary
- Lack of fibre and/or fluid intake

Motility
- Slow-transit constipation
- Irritable bowel syndrome
- Drugs (see below)
- Chronic intestinal pseudo-obstruction

Structural
- Colonic carcinoma
- Diverticular disease
- Hirschsprung's disease

Defecation
- Anorectal disease (Crohn's, fissures, haemorrhoids)
- Obstructed defecation

Non-gastrointestinal disorders

Drugs
- Opiates
- Anticholinergics
- Calcium antagonists
- Iron supplements
- Aluminium-containing antacids

Neurological
- Multiple sclerosis
- Spinal cord lesions
- Cerebrovascular accidents
- Parkinsonism

Metabolic/endocrine
- Diabetes mellitus
- Hypercalcaemia
- Hypothyroidism
- Pregnancy

Others
- Any serious illness with immobility, especially in the elderly
- Depression

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Acute upper gastrointestinal hemorrhage

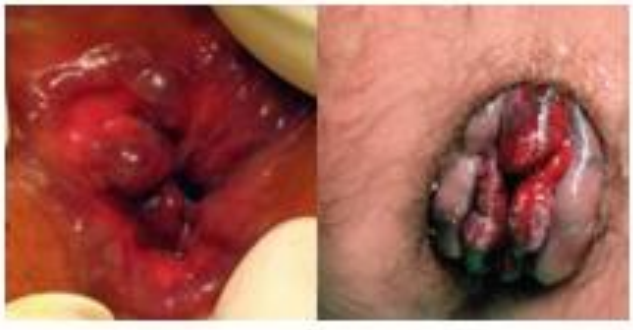
- Hematemesis is red with clots when bleeding is rapid and profuse, or black ('coffee grounds') when less severe.
- Syncope may occur and is due to hypotension from intravascular volume depletion.
- Symptoms of anaemia suggest chronic bleeding.

Melena is the passage of black, tarry stools containing altered blood; it is usually caused by bleeding from the upper gastrointestinal tract, although hemorrhage from the right side of the colon is occasionally responsible. The characteristic color and smell are the result of the action of digestive enzymes and of bacteria upon hemoglobin.

- Severe acute upper gastrointestinal bleeding can sometimes cause maroon or bright red stool.

Lower gastrointestinal bleeding

- This may be due to hemorrhage from the colon, anal canal or small bowel. It is useful to distinguish those patients who present with profuse, acute bleeding from those who present with chronic or sub acute bleeding of lesser severity.



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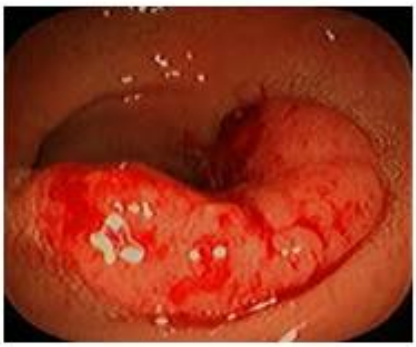
22.20 Causes of lower gastrointestinal bleeding

Severe acute	
• Diverticular disease • Angiodysplasia • Ischaemia	• Meckel's diverticulum • Inflammatory bowel disease (rarely)
Moderate, chronic/subacute	
• Fissure • Haemorrhoids • Inflammatory bowel disease • Carcinoma	• Large polyps • Angiodysplasia • Radiation enteritis • Solitary rectal ulcer

Chronic occult gastrointestinal bleeding

- occult means that blood or its breakdown products are present in the stool but cannot be seen by the naked eye.
- Occult bleeding may reach 200 mL per day and cause iron deficiency anaemia.
- Any cause of gastrointestinal bleeding may be responsible but the most important is colorectal cancer, particularly carcinoma of the caecum, which may produce no gastrointestinal symptoms.

• Testing the stool for the presence of blood is unnecessary and should not influence whether or not the gastrointestinal tract is imaged because bleeding from tumors is often intermittent and a negative fecal occult blood (FOB) test does not exclude the diagnosis.



Abdominal pain

• There are four types of abdominal pain:

1. • *Visceral*. Gut organs are insensitive to stimuli such as burning and cutting but are sensitive to distension, contraction, twisting and stretching. Pain from unpaired structures is usually but not always felt in the midline.
2. • *Parietal*. The parietal peritoneum is innervated by somatic nerves, and its involvement by inflammation, infection or neoplasia causes sharp, well-localised and lateralized pain.
3. *Referred pain*. (For example, gallbladder pain is referred to the back or shoulder tip.)

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4. *Psychogenic*. Cultural, emotional and psychosocial factors influence everyone's experience of pain. In some patients, no organic cause can be found despite investigation, and psychogenic causes (depression or somatization disorder) may be responsible

The acute abdomen

- This accounts for approximately 50% of all urgent admissions to general surgical units. The acute abdomen is a consequence of one or more pathological processes.

22.25 Causes of acute abdominal pain

Inflammation	
• Appendicitis	• Pancreatitis
• Diverticulitis	• Pyelonephritis
• Cholecystitis	• Intra-abdominal abscess
• Pelvic inflammatory disease	
Perforation/rupture	
• Peptic ulcer	• Ovarian cyst
• Diverticular disease	• Aortic aneurysm
Obstruction	
• Intestinal obstruction	• Ureteric colic
• Biliary colic	
Other (rare)	
• See Box 22.27	

The acute abdomen:Management

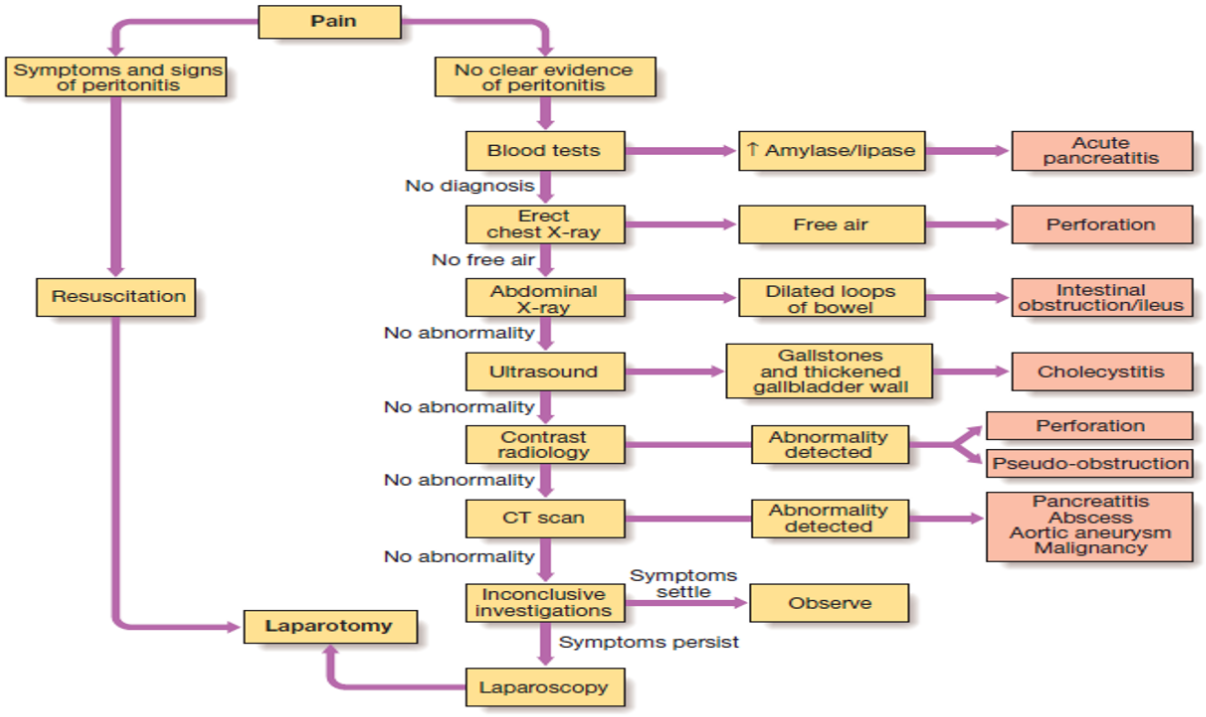

Fig. 22.24 Management of acute abdominal pain: an algorithm.

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Chronic or recurrent abdominal pain

- It is essential to take a detailed history, paying particular attention to features of the pain and any associated symptoms.

22.27 Extra-intestinal causes of chronic or recurrent abdominal pain

Retroperitoneal	
• Aortic aneurysm • Malignancy	• Lymphadenopathy • Abscess
Psychogenic	
• Depression • Anxiety	• Hypochondriasis • Somatisation
Locomotor	
• Vertebral compression/ fracture	• Abdominal muscle strain
Metabolic/endocrine	
• Diabetes mellitus • Addison's disease	• Acute intermittent porphyria • Hypercalcaemia
Drugs/toxins	
• Corticosteroids • Azathioprine	• Lead • Alcohol
Haematological	
• Sickle-cell disease	• Haemolytic disorders
Neurological	
• Spinal cord lesions • Tabes dorsalis	• Radiculopathy

References of Lec 1 and 2: Davidson's principles and Practice of medicine , 23rd edition , 2018.

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