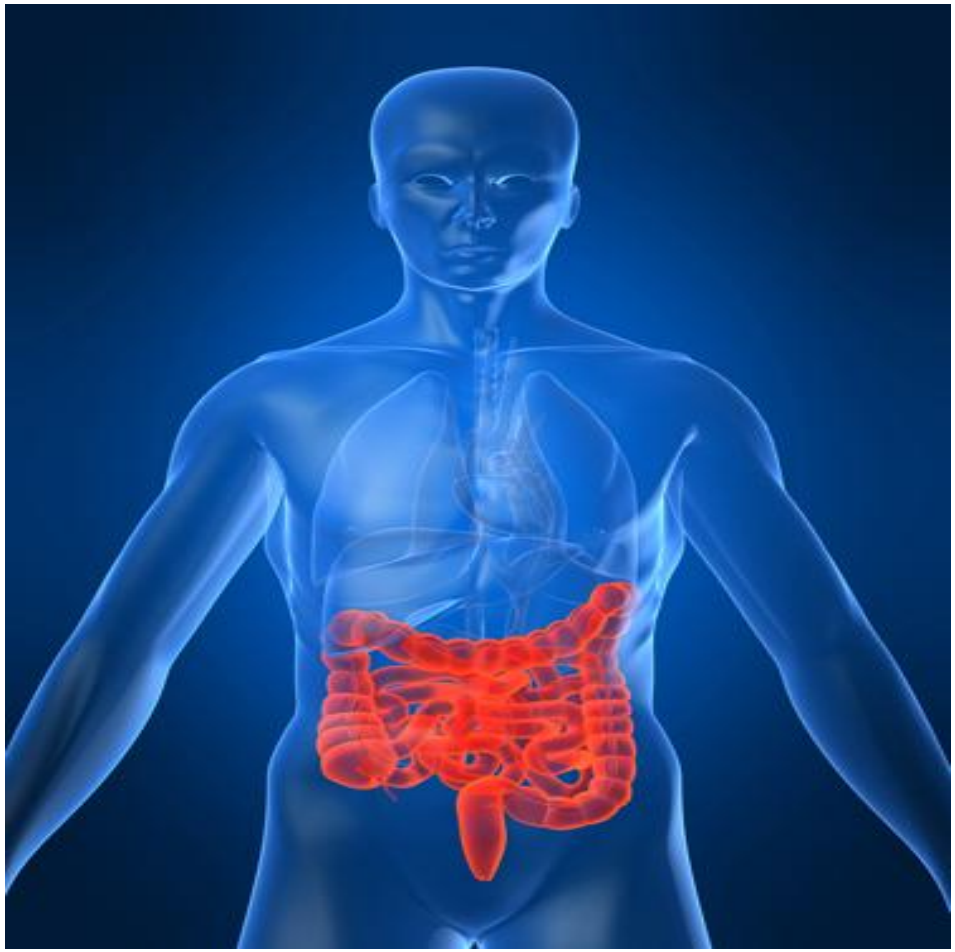
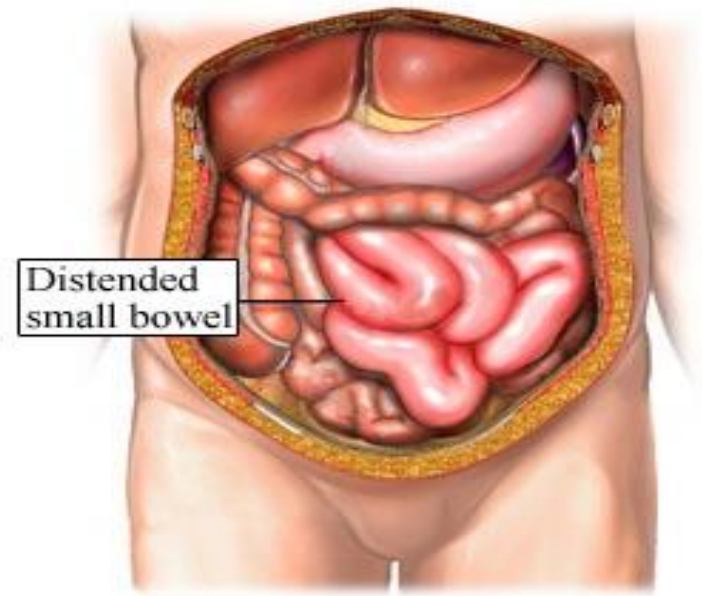
Chronic intestinal pseudo-obstruction



- disorders are affect the smooth muscle or nerves of the intestine.
- Many cases are 'primary' (idiopathic), while others are 'secondary' to a variety of disorders or drugs



Causes

Primary or idiopathic

- 1- Rare familial visceral myopathies or neuropathies
- 2- Congenital aganglionosis

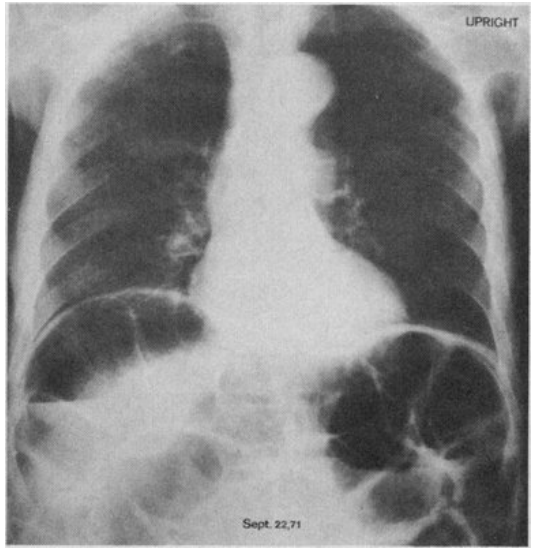
Secondary

- 1- Drugs, e.g. opiates, tricyclic antidepressants, phenothiazines
- 2- Smooth muscle disorders, e.g. scleroderma, amyloidosis, mitochondrial myopathies
- 3- Myenteric plexus disorders, e.g. paraneoplastic syndrome in small-cell lung cancer
- 4- CNS disorders, e.g. Parkinsonism, autonomic neuropathy
- 5- Endocrine and metabolic disorders, e.g. hypothyroidism, phaeochromocytoma, acute intermittent porphyria

Clinical features

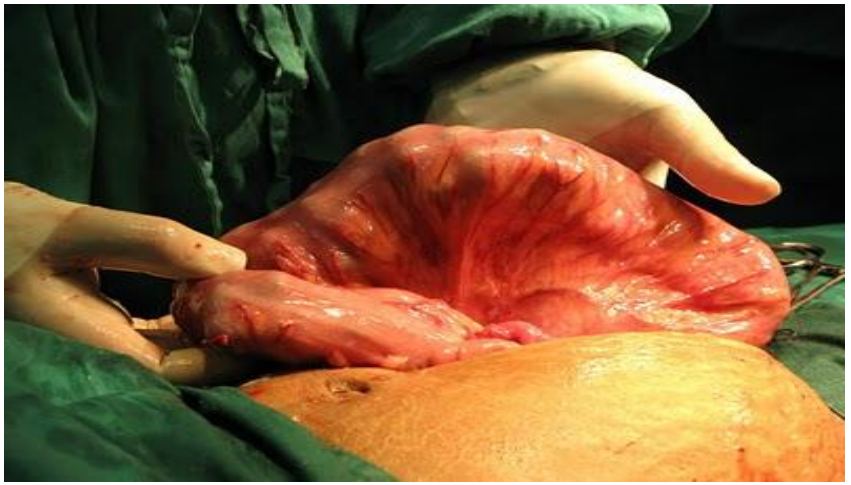
- There are recurrent episodes of nausea, vomiting, abdominal discomfort and distension, often worse after food. Alternating constipation and diarrhoea occur and weight loss results from malabsorption (due to bacterial overgrowth) and fear of eating.
- There may also be symptoms of dysmotility affecting other parts of the gastrointestinal tract, such as dysphagia, and, in primary cases, features of bladder dysfunction. Some patients have obscure but severe abdominal pain which is extremely difficult to manage.

Investigations



- The diagnosis is often delayed and a high index of suspicion is needed.
- Plain X-rays show distended loops of bowel and air-fluid levels, but barium studies demonstrate no mechanical obstruction. Laparotomy is sometimes performed to exclude obstruction and to obtain full-thickness biopsies of the intestine. Electron microscopy, histochemistry and special stains define rare, specific syndromes.

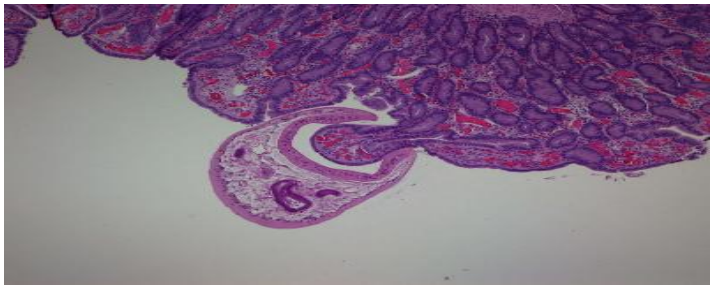
Management



- This is often difficult.
- Underlying causes should be addressed and further surgery avoided if at all possible.
- Metoclopramide or domperidone may enhance motility, and antibiotics are given for bacterial overgrowth.
- Nutritional and psychological support is also necessary.

Protein-losing enteropathy

- () This term is used when there is excessive loss of protein into the gut lumen, sufficient to cause hypoproteinaemia.
- Protein-losing enteropathy occurs in many gut disorders but is most common in those where ulceration occurs .
- In other disorders protein loss results from increased mucosal permeability or obstruction of intestinal lymphatic vessels.
- ()Patients present with peripheral oedema and hypoproteinaemia in the presence of normal liver function and without proteinuria.
- () The diagnosis is confirmed by measurement of faecal clearance of α_1-antitrypsin or ^{51}Cr-labelled albumin after intravenous injection. Other investigations are performed to determine the underlying cause.
- () Treatment is that of the underlying disorder, with nutritional support



Causes of protein-losing enteropathy

() With mucosal erosions or ulceration

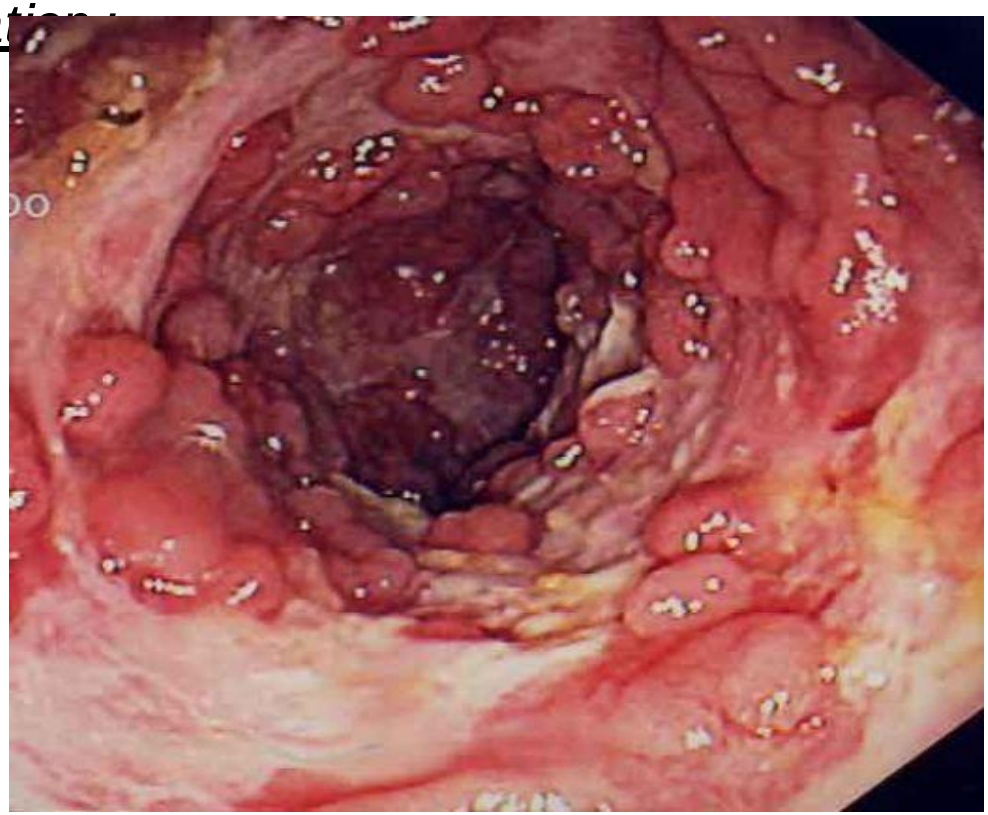
- Crohn's disease
- Ulcerative colitis
- Radiation damage
- Oesophageal, gastric or colonic cancer
- Lymphoma

() Without mucosal erosions or ulcerat

- Ménétrier's disease
- Bacterial overgrowth
- Coeliac disease
- Tropical sprue
- Eosinophilic gastroenteritis
- SLE

() With lymphatic obstruction :

- Intestinal lymphangiectasia
- Constrictive pericarditis
- Lymphoma
- Whipple's disease



Intestinal lymphangiectasia

- This may be primary, resulting from congenital malunion of lymphatics,
- or secondary to lymphatic obstruction due to lymphoma, filariasis or constrictive pericarditis.
- Impaired drainage of intestinal lymphatic vessels leads to discharge of protein and fat-rich lymph into the gastrointestinal lumen.

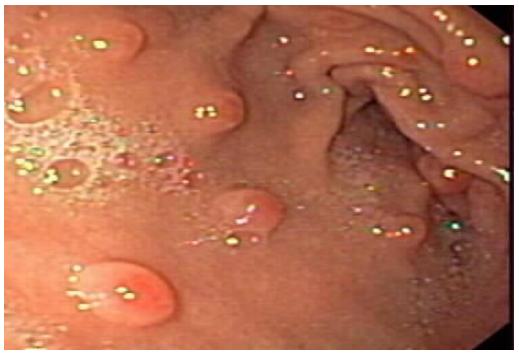
- The condition presents with peripheral lymphoedema, pleural effusions or chylous ascites, and steatorrhoea.
- Investigations reveal hypoalbuminaemia, lymphocytopenia and reduced serum immunoglobulin concentrations. Jejunal biopsies show greatly dilated lacteals, and lymphangiography shows lymphatic obstruction. Treatment consists of a low-fat diet with medium-chain triglyceride supplements

Ulceration of the small intestine

- Idiopathic
- Inflammatory bowel disease, e.g. Crohn's
- Drugs, e.g. NSAIDs, enteric-coated potassium tablets
- Ulcerative jejuno-ileitis
- Lymphoma and carcinoma
- Infections, e.g. tuberculosis, typhoid, *Yersinia enterocolitica*
- Others, e.g. radiation, vasculitis

Eosinophilic gastroenteritis

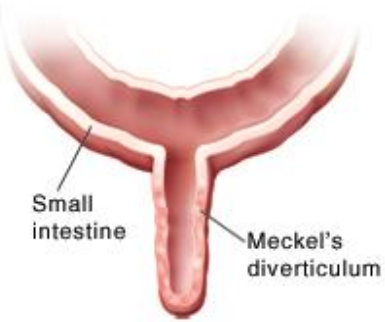
- it is characterised by eosinophil infiltration affecting the gut wall in the absence of parasitic infection or eosinophilia of other tissues. Of unkown etoliogy.
- Peripheral blood eosinophilia is present in 80% of cases.
- Clinical features :
- There are features of obstruction and inflammation, such as colicky pain, nausea and vomiting, diarrhoea and weight loss.
- Protein-losing enteropathy occurs and up to 50% of patients have a history of other allergic disorders. Serosal involvement may produce eosinophilic ascites.



Diagnosis and management

- The diagnosis is made by histological assessment of multiple endoscopic biopsies.
- Other investigations are performed to exclude parasitic infection and other causes of eosinophilia.
- A raised serum IgE concentration is often seen. Dietary manipulations are rarely effective, although elimination diets, especially of milk, may benefit a few patients.
- Severe symptoms are treated with prednisolone 20-40 mg daily and/or sodium cromoglicate, which stabilises mast cell membranes.
- The prognosis is good in the majority of patients.

Meckel's diverticulum



- This is the most common congenital anomaly of the gastrointestinal tract and occurs in 0.3-3% of people. Most patients are asymptomatic. The diverticulum results from failure of closure of the vitelline duct, with persistence of a blind-ending sac arising from the antimesenteric border of the ileum; it usually occurs within 100 cm of the ileocaecal valve, and is up to 5 cm long.
- Approximately 50% contain ectopic gastric mucosa; rarely, colonic, pancreatic or endometrial tissue is present.
- Diagnosis can be made by scanning the abdomen using a gamma counter following an intravenous injection of ^{99m}Tc-pertechnate, which is concentrated by ectopic parietal cells.
- complications include: bleeding per rectum, intestinal obstruction, diverticulitis, intussusception and perforation.
- Intervention is unnecessary unless complications occur.
- The vast majority of patients remain asymptomatic throughout life.

Lactose intolerance

- Human milk contains around 200 mmol/L (68 g/L) of lactose which is normally digested to glucose and galactose by the brush border enzyme lactase prior to absorption.
- In cases of genetically determined (primary) lactase deficiency, jejunal morphology is normal.
- 'Secondary' lactase deficiency occurs as a consequence of disorders which damage the jejunal mucosa, such as coeliac disease and viral gastroenteritis.

Clinical features

- In most people lactase deficiency is completely asymptomatic.
- However, some complain of colicky pain, abdominal distension, increased flatus, borborygmi and diarrhoea after ingesting milk or milk products.
- The lactose hydrogen breath test is a useful non-invasive confirmatory investigation.
- Dietary exclusion of lactose is recommended, although most sufferers are able to tolerate small amounts of milk without symptoms. Addition of commercial lactase preparations to milk has been effective in some studies but is costly.

Abdominal tuberculosis

- *Mycobacterium tuberculosis* is a rare cause of abdominal disease in Caucasians but must be considered in people in and from the developing world and in AIDS patients.
- Gut infection usually results from human *M. tuberculosis* which is swallowed after coughing. Many patients have no pulmonary symptoms and a normal chest X-ray.
- The area most commonly affected is the ileocaecal region; Abdominal pain can be acute or of several months' duration
- Low-grade fever is common but not invariable.
- tuberculosis can affect any part of the gastrointestinal tract, and perianal disease with fistula is recognised.
- Peritoneal tuberculosis may result in peritonitis with exudative ascites, associated with abdominal pain and fever.
- Granulomatous hepatitis occurs.

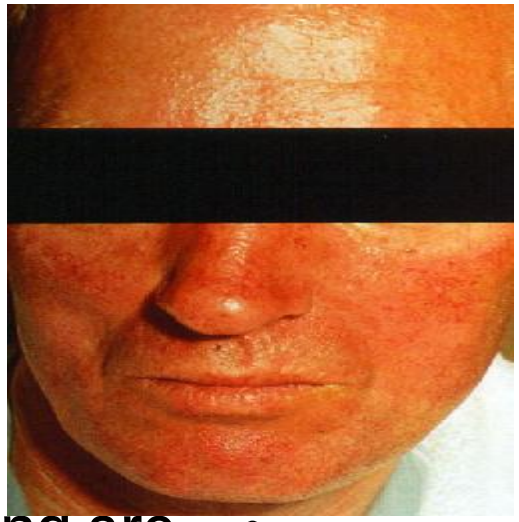
Investigations:

- an elevated ESR; a raised serum alkaline phosphatase concentration suggests hepatic involvement. Histological confirmation should be sought by endoscopy, laparoscopy or liver biopsy. Caseation of granulomas is not always seen and acid- and alcohol-fast bacteria are often scanty. Culture may be helpful but identification of the organism may take 6 weeks and diagnosis is now possible on biopsy specimens by PCR-based techniques.

Management :

- When the presentation is very suggestive of abdominal tuberculosis, chemotherapy with four drugs-isoniazid, rifampicin, pyrazinamide and ethambutol

Carcinoid tumours



- These are derived from enterochromaffin cells and are most common in the appendix.
- Localised spread and the potential for metastasis to the liver increase with primary lesions over 2 cm in diameter.
- Carcinoid tumours also occur in the rectum and in the appendix; those in the latter are usually benign.
- The term 'carcinoid syndrome' refers to the systemic symptoms produced when secretory products of the neoplastic enterochromaffin cells reach the systemic circulation .
- The syndrome is only seen when 5-HT, bradykinin and other peptide hormones are released by hepatic metastases.

Clinical features of carcinoid tumours

-Small-bowel obstruction due to the tumour mass •

-Intestinal ischaemia (due to mesenteric infiltration or vasospasm) •

-Hepatic metastases causing pain, hepatomegaly and jaundice •

-Flushing and wheezing •

-Diarrhoea •

-Cardiac involvement (tricuspid regurgitation, pulmonary stenosis, right ventricular endocardial plaques) leading to heart failure •

-Facial telangiectasia •

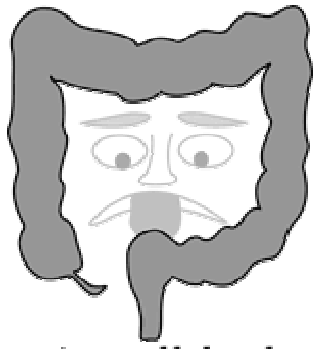
Management

- The treatment of a carcinoid tumour is surgical resection.
- The treatment of carcinoid syndrome is palliative because hepatic metastases have occurred, although prolonged survival is common. Surgical removal of the primary tumour is usually attempted and the hepatic metastases can be excised as reduction of tumour mass improves symptoms.
- Hepatic artery embolisation retards growth of hepatic deposits.
- Octreotide 200 μg 8-hourly by subcutaneous injection is used to reduce tumour release.
- Cytotoxic chemotherapy has only a minor role

Lymphoma

- Non-Hodgkin lymphoma may involve the gastrointestinal tract as part of more generalised disease or may rarely arise in the gut, with the small intestine being most commonly affected.
- Most are of B-cell origin, although lymphoma associated with coeliac disease is derived from T cells (enteropathy-associated T-cell lymphoma).
- Colicky abdominal pain, obstruction and weight loss are the usual presenting features, and perforation is also occasionally seen. Malabsorption is only a feature of diffuse bowel involvement and hepatosplenomegaly is rare.
- The diagnosis is made by small bowel biopsy, radiological contrast studies and CT.
- Surgical resection where possible is the treatment of choice, with radiotherapy and combination chemotherapy reserved for those with advanced disease.

IRRITABLE BOWEL SYNDROME



- is a functional bowel disorder in which
- abdominal pain is associated with defecation or a change in bowel habit.
- Approximately 20% of the general population fulfillment diagnostic criteria for IBS but only 10% of these consult their doctors because of gastrointestinal symptoms.
- IBS is the most common cause of gastrointestinal referral and accounts for frequent absenteeism from work and impaired quality of life.
- Young women are affected 2-3 times more often than men.
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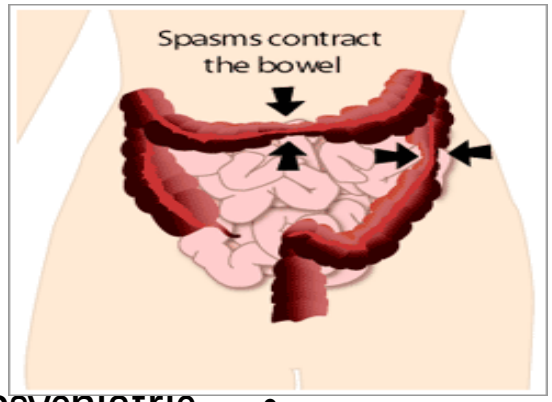
Pathophysiology



Psychosocial factors

about 50% of patients referred to hospital meet the criteria for a psychiatric diagnosis. A range of disturbances are identified, including anxiety, depression, somatisation and neurosis. Panic attacks are also common. Acute psychological stress and overt psychiatric disease are known to alter visceral perception and gastrointestinal motility in both irritable bowel patients and healthy people.

Altered gastrointestinal motility

A range of motility disorders are found but none is diagnostic. Patients with diarrhoea as a predominant symptom exhibit clusters of rapid jejunal contraction waves, rapid intestinal transit and an increased number of fast and propagated colonic contractions. Those who are predominantly constipated have decreased orocaecal transit and a reduced number of high-amplitude, propagated colonic contraction waves but there is no consistent evidence of abnormal motility.

Abnormal visceral perception

IBS is associated with increased sensitivity to intestinal distension induced by inflation of balloons in the ileum, colon and rectum, a consequence of altered central nervous system processing of visceral sensation. This is more common in women and in diarrhoea-predominant IBS.

Infection and allergy Between 7 and 32% of patients develop IBS following an episode of gastroenteritis, more commonly young women and those with existing background psychological problems. Others may be intolerant of specific dietary components, particularly lactose and wheat..

Features of irritable bowel syndrome

- Colicky abdominal pain
- Altered bowel habit
- Abdominal distension
- Rectal mucus
- Feeling of incomplete defecation

Features supporting a diagnosis of IBS

- Symptoms > 6 months
- Frequent consultations for non-GI problems
- Previous medically unexplained symptoms
- Stress worsens symptoms

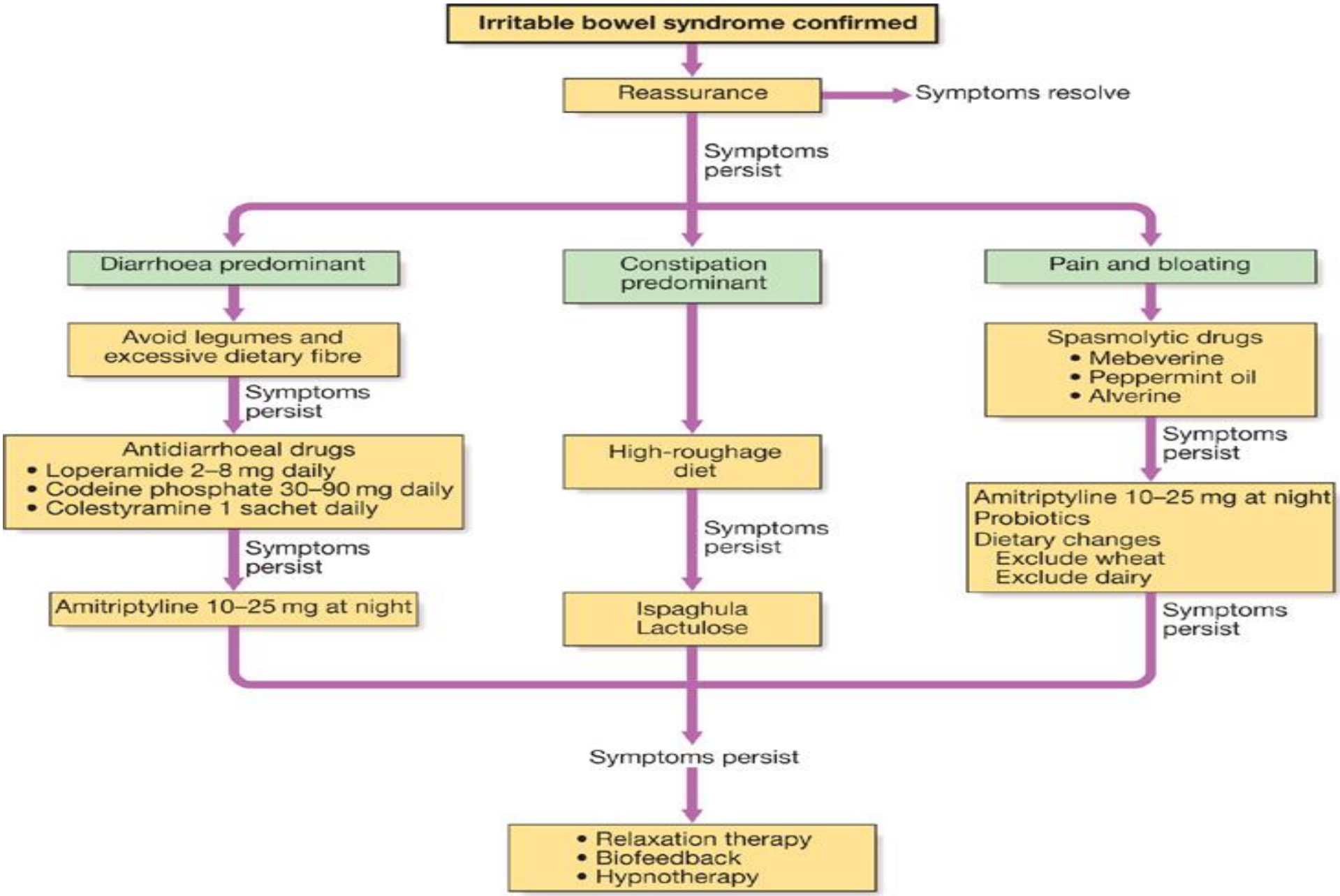
"I'm afraid that your irritable bowel syndrome has progressed. You now have furious and vindictive bowel syndrome."

Alarm features

- Age > 50 years; male gender
- Weight loss
- Nocturnal symptoms
- Family history of colon cancer
- Anaemia
- Rectal bleeding

The diagnosis

- () is clinical in nature and can be made confidently in most patients under the age of 40 years without resorting to complicated tests .
- () Full blood count and sigmoidoscopy are usually done routinely and are normal in IBS. Colonoscopy should be undertaken in older patients to exclude colorectal cancer.
- All patients who give a history of rectal bleeding should undergo colonoscopy to exclude colonic cancer or IBD.



Colledge et al: Davidson's Principles and Practice of Medicine, 21st Edition

New treatment in IBS

- () Rifaximin is a poorly absorbed antibiotic. It's an extremely effective drug for both gram-positive and gram-negative bacteria and also for anaerobes, in particular, *Clostridium difficile*.
- Work through microflora changing and the effect of microflora on degradation of food products. Also used in traveller diarrhea, hepatic encephalopathy, rosacea & small intestinal bacterial overgrowth