

Functional dyspepsia

chronic dyspepsia in the absence of organic disease. Symptoms include early satiety, fullness, bloating and nausea.

Pathophysiology

The cause is poorly understood but probably there is spectrum of mucosal, motility and psychiatric disorders.

Clinical features

usually young (< 40 years) and women are affected twice as commonly as men.

Abdominal discomfort and nausea, satiety and bloating after meals. Morning symptoms are characteristic and pain or nausea may occur on waking.

DDX: irritable bowel syndrome, Peptic ulcer disease in older subjects intra-abdominal malignancy.

▲ There are no diagnostic signs, apart perhaps from inappropriate tenderness on abdominal palpation. Symptoms may appear disproportionate to clinical well-being and there is no weight loss. Patients often appear anxious.

▲ A drug history should be taken and the possibility of a depressive illness should be considered.

▲ Pregnancy should be ruled out in young women before radiological studies are undertaken.

▲ Alcohol misuse should be suspected when early morning nausea and retching are prominent.

Investigations

1-The history will often suggest the diagnosis.

2-All patients should be checked for *H. pylori* infection

3-patients over the age of 55 years should undergo endoscopy to exclude mucosal disease.

4-an ultrasound scan may detect gallstones, these are rarely responsible for dyspeptic symptoms.

Management

▲ explanation and reassurance. Possible psychological factors should be Explored.

▲ Up to 10% of patients benefit from *H. pylori* eradication and this should be offered to infected patients.

▲ Drug treatment is not especially successful. Antacids are sometimes helpful. Prokinetic drugs, such as metoclopramide or domperidone, may be given before meals if nausea, vomiting or bloating is prominent.. H2-receptor antagonist drugs may be tried if night pain or heartburn is troublesome. Low-dose tricyclic agents, such as amitriptyline, are of value in up to two-thirds.

Gastroparesis

Defective gastric emptying without mechanical obstruction of the stomach or duodenum.

Primary : due to inherited or acquired disorders of the gastric pacemaker

secondary :

▲ disorders of autonomic nerves (particularly diabetic neuropathy)

▲ gastroduodenal musculature (systemic sclerosis, myotonic dystrophies and amyloidosis).

▲ Drugs such as opiates, calcium channel antagonists and those with anticholinergic activity (tricyclics, phenothiazines) can also cause gastroparesis.

C.F: Early satiety and recurrent vomiting are the major symptoms; abdominal fullness and a succussion splash may be present on examination.

Treatment is based upon small, frequent, low-fat meals

-use of metoclopramide and domperidone.

-In severe cases, nutritional failure can occur and long-term jejunostomy feeding or total TPN is required.

-Surgical insertion of a gastric neuro stimulator has been successful in some cases, especially those complicating diabetic autonomic neuropathy.

Irritable bowel syndrome (IBS)

Recurrent abdominal pain in association with abnormal defecation in the absence of a structural abnormality of the gut. Young women are affected 2–3 times more often than men. Coexisting conditions, such as non-ulcer dyspepsia, chronic fatigue syndrome, dysmenorrhoea and fibromyalgia, are common.

Pathophysiology

1-Behavioural and psychosocial factors:

50% of patients referred to hospital have a psychiatric illness, such as 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.

2-Physiological factors

IBS may be a serotonergic (5-HT) disorder, as evidenced by relatively excessive release of 5-HT in diarrhoea-predominant IBS (D-IBS) and relative deficiency with constipation-predominant IBS (C-IBS). Accordingly, 5-HT₃ receptor antagonists are effective in D-IBS, while 5-HT₄ agonists improve bowel function in C-IBS. There is some evidence that IBS may represent a state of low-grade gut inflammation or immune activation, not detectable by tests, with raised numbers of mucosal mast cells, which sensitise enteric neurons by releasing histamine and tryptase. Some patients respond positively to mast cell stabilisers, such as ketotifen, which supports a pathogenic role of mast cells in at least some patients. Immune activation may be associated with altered CNS processing of visceral pain signals. This is more common in women and in D-IBS, and may be triggered by a prior episode of gastroenteritis with *Salmonella* or *Campylobacter* species.

3-Luminal factors

Both quantitative and qualitative alterations in intestinal bacterial contents (the gut microbiota) have been reported. Small intestinal bacterial overgrowth (SIBO) may be present in some patients and lead to symptoms. This 'gut dysbiosis' may explain the response to probiotics or the non-absorbable antibiotic rifaximin that has been reported in trials. Dietary factors are also important. Some patients have chemical food intolerances (not allergy) to poorly absorbed, short-chain carbohydrates (lactose, fructose and sorbitol, among others), collectively known as FODMAPs (fermentable oligo-, di- and monosaccharides, and polyols). Their fermentation in the colon leads to bloating, pain, wind and altered bowel habit. Noncoeliac gluten sensitivity (negative coeliac serology and normal duodenal biopsies) seems to be present in some IBS patients, while others may be intolerant of chemicals such as salicylates or benzoates, found in certain foods.

Clinical features

Rome III criteria for diagnosis of irritable bowel syndrome:

Recurrent abdominal pain or discomfort at least 3 days/mth in the last 3 months, associated with *two or more* of the following:

- Improvement with defecation
- Onset associated with a change in frequency of stool
- Onset associated with a change in form (appearance) of stool.

This is usually colicky or cramping in nature, felt in the lower abdomen and relieved by defecation. Abdominal bloating worsens throughout the day; . The bowel habit is variable. Most patients alternate between episodes of diarrhea and constipation, but it is useful to classify patients as having predominantly constipation or predominantly diarrhoea. Those with constipation tend to pass infrequent pellety stools, usually in association with abdominal pain or proctalgia. Those with diarrhoea have frequent defecation but produce low-volume stools and rarely have nocturnal symptoms. Passage of mucus is common but rectal bleeding does not occur. Patients do not lose weight and are constitutionally well. Physical examination is generally unremarkable, with the exception of variable tenderness to palpation.

Diagnosis

supporting a diagnosis of IBS

- Symptoms > 6 mths
- Frequent consultations for non-gastrointestinal problems
- Previous medically unexplained symptoms
- Stress worsens symptoms

Alarm features

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

♣ Full blood count and faecal calprotectin, with or without sigmoidoscopy, are usually done and are normal in IBS.

♣ Colonoscopy should be undertaken in older patients (over 40 years of age) to exclude colorectal cancer. Endoscopic examination is also required in patients who report rectal bleeding to exclude colon cancer and IBD. Those who present atypically require investigations to exclude other gastrointestinal diseases.

♣ Diarrhoea predominant patients justify investigations to exclude coeliac disease , microscopic colitis , lactose intolerance , bile acid malabsorption , thyrotoxicosis and, in developing countries, parasitic infection

Management

♣ The most important steps are to make a positive diagnosis and reassure the patient.

♣ In patients who fail to respond to reassurance, treatment is traditionally tailored to the predominant symptoms . Up to 20% may benefit from a wheat-free diet, some may respond to lactose exclusion, and excess intake of caffeine or artificial sweeteners, such as sorbitol, should be addressed. A more restrictive, 'low-

FODMAP' diet, supervised by a dietitian, with gradual re-introduction of different food groups, may help some patients, as may a trial of a gluten-free diet.

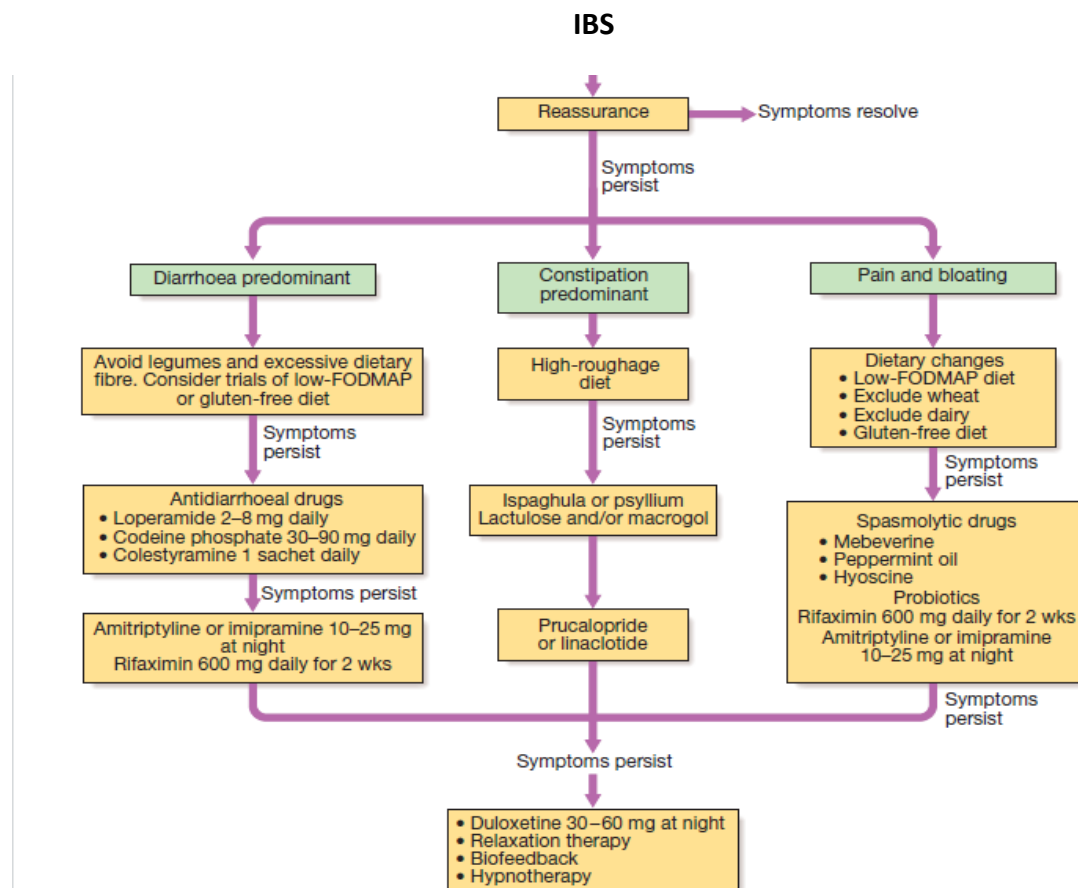
♠Probiotics, in capsule form, can be effective if taken for several months in patients with intractable symptoms.

♠sometimes benefit from several months of therapy with a tricyclic antidepressant, such as amitriptyline or imipramine . It may act by reducing visceral sensation and by altering gastrointestinal motility. Anxiety and affective disorders may also require specific treatment.

♠The 5-HT4 agonist prucalopride, the guanylate cyclase-C receptor agonist linaclotide, and chloride channel activators, such as lubiprostone, can be effective in constipation predominant IBS.

♠Trials of anti-inflammatory agents, such as ketotifen or mesalazine, and the antibiotic rifaximin may be considered in some patients with difficult symptoms but are best prescribed only after specialist referral.

♠Psychological interventions, such as cognitive behavioural therapy, relaxation and gut-directed hypnotherapy, should be reserved for the most difficult cases.



Functional causes of vomiting

Psychogenic retching or vomiting may arise in anxiety. It typically occurs on waking or immediately after breakfast and only rarely later in the day. The disorder . Early morning vomiting also occurs in pregnancy, alcohol misuse and depression. Although functional vomiting may occur regularly over long periods, there is little or no weight loss.. The cause of this cyclical vomiting syndrome is

unknown, but in some adults it is associated with cannabis use. In all patients, it is essential to exclude other common causes. Tranquillisers and antiemetic drugs (metoclopramide, domperidone, prochlorperazine) have only a secondary place in management. Antidepressants in full dose may be effective...

Causes of vomiting:

