Dealing With Irritable Bowel Syndrome

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Pages with reference to book, From 47 To 50

Irritable bowel syndrome is a common illness, a diagnosis of exclusion, the pathogenesis of which is still not well understood. It is a chronic relapsing condition associated with disturbed gut motility and heightened visceral perception. Psychological disturbances and altered illness attitudes influence the decision to seek the health care. Usual presenting symptoms are constipation, diarrhea or alternation of two, abdominal pain and distention. It is utmost important to rule out any organic or biochemical cause for the patient's symptoms. Management strategies focus on establishment of a successful physician patient relationship and multiple therapeutic options to improve specific symptoms of the patient e.g., anxiety, constipation, diarrhea and abdominal pain. Dietary and life style changes are often helpful. Specific pharmacotherapy includes Fiber supplements, antidepressants, anxiolytics and antispasmodics, antidiarrheal and prokinetic drugs. Treatment has to be individualized.

Many patients visit gastroenterology clinics with complaints of excessive gas and bloating, diarrhea, constipation, alternate diarrhea and constipation, urgency, feeling of incomplete evacuation and abdominal pain. If you further probe in, they would admit that they have been suffering from these symptoms for years and have been visiting different physicians and gastroenterologists. Many terminologies have been used to describe their disorder, which include spastic bowel, mucus colitis, splenic flexure syndrome, nervous bowel, and functional bowel disease. The term irritable bowel syndrome is the preferred terminology.

Definitions

Irritable bowel syndrome (IBS) consists of a group of continuous or intermittent symptoms suggestive of bowel dysfunction in the absence of structural or biochemical abnormalities of bowel. These symptoms of abdominal pain and altered bowel habits should be present for at least three months. The diagnostic criteria for lBS are given in Table-I. Six symptoms were identified by Manning et al[1]. Predictive values of Manning criteria have been challenged in some of the subsequent studies[2-4]. TheROME criteria were developed by international experts for research and clinical purposes[5]. Depending on predominant pattern of symptoms, the patients of lBS may be further subdivided into constipation predominant and diarrhea predominant, cyclic and spastic groups.

Prevalence

lBS accounts for more than 25% of the patients referred to the gastroenterology clinic[6,7]. It is a common experience[8]. One quarter of the general population admits to the bowel disturbances consistent with lBS[9] but only one third of these seek medical advice. It may be that psychological problems and abnormal illness attitudes like preoccupation, hypochondriacal beliefs and disease phobias influence the decision to seek medical advice[10]. Patients with multiple symptoms are more likely to consult a physician[11]. IBS is more common in women[12,13]. It may be related to female sex hormones which are known to influence the bowel motility[14].

Pathophysiology

The etiology of IBS is poorly understood and is most likely to be multifactorial. it may not always be possible to separate functional gastrointestinal symptoms into lBS or dyspepsia and its subgroups[15]. The patient may be having predominant physiological disturbances or predominant psychological stress or psychiatric illness. The physiological disturbances may also vary in subgroups with different symptoms. There may be visceral hypersensitivity to different stimulie or motility disturbances (hyper-responsivity) or there may be food intolerance. Thus IBS encompasses several different underlying

pathophysiological mechanisms.

a) Disorder of motility and visceral perception

There is a substantial evidence to support that lBS is a disorder of motility[16,17] and enhanced visceral perception[18]. Manometric studies have shown cluster contractions of small intestine[19-21], and abnormal transit time of small and large intestine[22]. Scintigraphic measurements have shown rapid transit through the ascending and transverse colon in diarrhea predominant IBS[23], delay in colonic transit in patients with idiopathic constipation[24] and rapid ileocaecal transit in both constipation predominant and diarrhea predominant forms of lBS[25]. Some workers showed that the myoelectric rhythm of the colon occurred at a slower pace 3 CPM (cycles per minute) in contrast to 6 CPM activity in normal subjects[26]. Later studies did not support[27]. There is substantial increase in the serum concentration of 5-hydroxytryptamine (5-HT) in patients with diarrhea predominant IBS. It could suggest a possible role of 5-HT in modulating gastrointestinal motility in these patients[28].

Balloon distention of different segments of colon causes pain in 50-60% of lBS patients compared to less than 10% of controls[29-31]. Altered rectal perception to balloon distention is seen in majority of cases and is a reliable biological marker of lBS[32,33]. It is manifested by lowered threshold for discomfort, increased intensity of sensations or altered viscerosomatic referral to thoracolumbar derrnatomes in addition to sacral dermatomes. The patients of LBS show selective hypersensitivity of intestinal mechano-sensitive pathways associated with a non-specific, probably central dysfunction of viscerosomatic referral[34]. There is activation of anterior cingulate cortex in healthy subjects during noxious rectal distention and during the anticipation of rectal pain. In patients of IBS such activation is seen in left prefrontal cortex[35].

There is not only colonic hypersensitivity but also extra colonic hypersensitivity. There is heightened perception of motor activity and distention in the small bowel[35] and esophagus[36]. The feeling of bloating and too much gas by these patients may be because these patients are more sensitive to intraluminal gas[38]. So LBS may be a disorder where there is abnormal perception of physiological changes occurring in the gut or there is exaggerated motor response to the physiological stimuli such as food indigestion or stress.

b) Psychological Factors

Although lBS is not primarily a psychiatric illness, psychological factors do influence the intensity of experience and adjustment to bowel symptoms. These patients have less coping capability[37]. They seek frequent medical advice for non-gastrointestinal problems as well[38]. For example these patients often complain of urinary symptoms[39] and sexual dysfunction[40]. Stressful events are more frequent in patients with lBS[41] and stress is known to aggravate bowel symptoms in thern[42]: lBS is fairly common in patients seeking treatment for major depression[43].

c) Food intolerance and Luminal Factors

There is high incidence of food intolerance in patients with typical lBS. Lactose intolerance is a common problem[44,45]. A great number of patients with IBS have lactose intolerance superimposed on lBS. This results in increased gaseous distention in patients who cannot tolerate distention resulting in worsening of symptoms. Some patients report symptoms after use of daity products even in the absence of lactose maldigestion46. Malabsorption of fructose and sorbitol may also cause similar symptoms[47,48]. Some patients of LBS with abdominal pain and diarrhea may successfully be treated by dietary manipulations. These subjects improve on some form of exclusion diets[49,50].

Some patients of functional diarrhea may actually be having malabsorption of bile salts[51]. Moreover, it has been shown that secretory epithelium of small intestine has increased sensitivity to bile acids in irritable bowel syndrome associated with diarrhea[52]. Short and medium-chain fatty acids may reach

right colon in patients who have rapid small bowel transit or borderline absorptive capacity. They induce rapidly propagated, high pressure waves in the right colon resulting in pain or diarrhea[53]. Intolerance of fatty foods may also be due to release of cholecystokinin by duodenum which increases the intestinal motility[54].

CLINICAL FEATURES

a) Features supporting the diagnosis

There are certain clinical features that support the diagnosis of LBS. Pain is usually lower abdominal, continuous of recurrent and is aggravated by meats and relieved by defecation[45]. Pain does not awaken the patient. There is a change in the frequency or consistency of stools (diarrhea or constipation). There may be associated urgency, straining or feeling of incomplete evacuation (rectal dissatisfaction). Patient may also complain of bloating and abdominal distention. Stool volume is usually small to moderate. Mucus may be present in stools. Symptoms are usually chronic, consistent in pattern but variable in severity[1,5]. Stress or other psychological disturbances may be associated with exacerbation or the onset of recent symptoms. Patients may seem withdrawn or depressed56. Weight is usually stable, however, some patients may admit some weight gain. On examination there may be tenderness in the left lower quadrant with palpable sigmoid colon.

b) Clinical Patterns

i) The symptoms in the Cyclic pattern of IBS may range in severity from very mild to functionally debilitating. There are alterations in the consistency of stools from very firm to very soft or watery, often with periods of urgency, abdominal pain or bloating. Cyclicity may be irregular or variable in intensity. There are intervening phases of "normal" bowel frequency and consistency.

ii) Spastic pattern of lBS is associated with hyperactive left colon with tenesmus, desire to strain, lower abdominal pain and feeling of incomplete evacuation. These patients may have hyperactive gastrocolic reflex and desire to defecate after meals. Sigmoid diverticuli and hemmorrhoids may appear over time.

iii) Patients with Constipation predominant lBS often complain of upper GI satiety, impaired concentration, bloating, frustration and lower abdominal pain. The stools are usually small and scybalous. Moulding into small pellets occur due to excessive haustral contractions and colonic spasm. Patients with Diarrhea predominant lBS may pass normal stools initially followed by soft and finally watery stools within few morning hours. There may also be postprandial diarrhea.

c) Features against the Diagnosis

Features against the diagnosis of lBS include onset in old age, steady progressive course, frequent awakening by pain or diarrhea, fever, weight loss, rectal bleeding other than from fissures or hemmorrhoids, steatorrhoea, dehydration and new symptoms after a long period.

DIFFERENTIAL DIAGNOSIS

Differential diagnosis of lBS includes lactose intolerance, gastro-esophageal reflux disease, peptic ulcer disease, giardiasis, gluten sensitive enteropathy, inflammatory bowel disease, tuberculosis, recurrent small bowel obstruction, gallbladder and pancreatic diseases, endocrinopath ies, laxative abuse and gynecologic disorders.

Many patients visit G.l. clinic with complaints of 'gas'. By this term they mean either too much belching or abdominal pain and bloating or excessive flatus. Too much belching may be due to nervous air swallowing, carbonated beverages upper G.I. diseases or uremia. In patients with abdominal pain and bloating, we will have to exclude disorders mentioned in the differential of lBS. Excessive flatus may be due to intestinal dysmotility or food intolerance. Symptoms of functional dyspepsia and IBS often overlaps as small intestinal mechanosensory pathways are disturbed in both conditions[57].

INVESTIGATIONS

a) Initial evaluation

After carefully assessing the patients symptoms, it is of utmost importance to rule out any organic or biochemical disorder. Initial screening should include complete blood count, ESR, stool examination

for occult blood, pus cells, parasites, ova and flexible sigmoidoscopy. Double contrast barium enema is recommended for those with positive family history of polyps or cancer. Due to high prevalence of lactose intolerance in Asian population hydrogen breath test should be done in those patients who present with predominant bloating and diarrhea.

b) Further Investigations

Further investigations are sometimes necessary to investigate the predominant symptoms. These include oesophagogastroduodenoscopy, colonoscopy, ultrasound abdomen, plain X-ray abdomen, small bowel enema, serum amylase, thyroid function tests, and motility studies. Selenium-75 homocholic acid taurine (SE75-HCAT) test may select out patients of idiopathic bile acid catharsis presenting with diarrhea. Retention is reduced below 10% after seven days in patients with malabsorbed bile acids[58]. Small bowel transit may be tested by hydrogen breath tests[59,60]. Lactulose and baked beans are metabolized by the colonic bacteria. A peak in the breath hydrogen concentration indicates the arrival of the head of the substrate in the colon unless small bowel is colonized by the colonic bacteria. A radioscintigraphic approach has been developed to measure the colonic transit time[61,62]. Radiolabelled 1mm resin pellets are delivered to the ascending colon in a capsule coated with pH sensitive polymer methacrylate, which dissolves in the slightly alkaline PH of the ileum. Serial scans are taken to discriminate transit time abnormalities.

Patients with predominant constipation may have colonic inertia or there may be a defecation disorder associated with pelvic floor dysfunction[63]. Anal canal manom etry, e lectromyography, defecography and an assessment of pelvic floor descent may be of help[64]

Heightened visceral hypersensitivity in lBS patients may be demonstrated by balloon distention of different parts of digestive tract[65] In patients with abdominal pain and bloating, small bowel pressure activity profile may suggest neuropathic process, mechanical obstruction or clustered contractions of IBS.

c) Laboratory Features against LBS

Laboratory features that are against the diagnosis of lBS are elevated erythrocyte sedimentation rate; leukocytosis; blood, pus or fat in stools; stool weight per day greater than normal healthy volunteers of same population; persistent diarrhea during 48 hours fast; hypokalemia; and manometric studies failing to show spastic response to recta! distention.

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