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Review Article

IRRITABLE BOWEL SYNDROME AND ITS HOMOEOPATHIC MANAGEMENT - A REVIEW

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ABSTRACT

Irritable bowel syndrome is a functional gastrointestinal disease with high population prevalence. The disorder can be debilitating in some patients, whereas others may have mild or moderate symptoms. It considerably affects quality of life and imposes a profound burden on patients, physicians and the health-care system. The condition has considerable consequences for quality of life (QOL) that are comparable to other chronic diseases, such as diabetes mellitus and hepatitis. Patients with the disorder have been consistently shown to have poor health-related quality of life (HRQOL). This disorder accounts for significant healthcare costs. In addition to direct medical expenses, costs to society come in the form of work absenteeism and impaired work productivity. The review aims to seek the scope of homoeopathy in the management of irritable bowel syndrome. The principles and practice of homoeopathic treatment overlap across these aspects of IBS for it prioritizes patient's subjective mental symptoms and seeks to provide tailored treatment for each individual patient.

INTRODUCTION

Functional Gastrointestinal Disorders (FGID), also known as Disorders of Gut-Brain Interaction (DGBI), can manifest with a wide variety of symptoms caused by abnormalities within gastrointestinal motility, visceral hypersensitivity, altered mucosal and immune function, altered gut microbiota, and central nervous system gut afferent input processing. [1]Irritable Bowel Syndrome (IBS) is one of the most commonly diagnosed and recognized DGBI.[2]

IBS is a functional bowel disorder (that is, not associated with structural or biochemical abnormalities that are detectable with the current routine diagnostic tools) characterized by abdominal pain or discomfort, stool irregularities and bloating. [3] Despite the increasing identification of distinct pathophysiology, there is not a unifying putative mechanism and patients are grouped clinically by symptoms, so that IBS is appropriately designated as a syndrome rather than a disease. [4]

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The codes for IBS in ICD-10 and ICD-11 are K58 [5]and DD91 [6] respectively.

Diagnostic Criteria

Recurrent abdominal pain at least 1 day per week on average in the last 3 months (onset at least 6 months before diagnosis), (abdominal pain for at least 4 days per months, for at least 2 months before diagnosis in cases of children [7]) associated with two or more of the following: [8]

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

IBS – subtypes

IBS is further divided into four subtypes based on predominant pattern of defecation:

1. IBS-C (constipation:>25% hard/lumpy, <25% loose / watery)
2. IBS-D (diarrhoea:>25% loose/watery, <25% hard /lumpy)
3. IBS-M (mixed:>25% loose/watery, >25% hard /lumpy)
4. IBS-U (unclassified:<25% loose/watery, <25% hard /lumpy).

In defining stool patterns, stool form is a major determinant and is classified according to Bristol Stool Form Scale (BSFS), and to qualify for a particular subtype, the predominant stool pattern should be present >25% of the time. [9][10] In Rome IV, bowel habits are based on stool forms only during days with abnormal bowel movements. [11] Bowel pattern subtypes are highly unstable. 75% of patients change subtypes, and 29% switch between IBS-C and IBS-D over 1 year. [12] Patients commonly transition between these subtypes. [13]

Epidemiology

Prevalence

Prevalence rates of IBS vary between 1.1% and 45%, based on population studies from countries worldwide, with a pooled global prevalence of 11.2%. [3] About 10–15% of the population are affected at some time but only 10% of these consult their doctors because of symptoms. [14] Incidence rates of IBS are not reported for most countries. [3]

Age Factor

IBS is a disorder that affects all ages, although most patients have their first symptoms before age 45.[12] The frequency of IBS does not demonstrate sex/gender differences until puberty, but differences can be observed subsequently. [15]

Gender Factor

Approximately two thirds of patients with IBS are women.[16] Among patients with IBS, men are more likely to report diarrhoea, and women to report constipation. [17]IBS is affected by menstruation, pregnancy, menopause, and hormone replacement therapy. [15] In India, IBS is more common among men than women. Symptoms in women vary according to the menstrual cycle, with increased reporting of GI symptoms in the late luteal and menses phases compared with the mid-follicular phase.[4]

Morbidity and Costs of IBS

An important feature of IBS is its significant impact on quality of life. [10] IBS is associated with a 21% reduction in work productivity along with substantial costs because of days lost from work, losses in productivity, excess physician visits, diagnostic testing, and use of medications. [4] [17]

Comorbidities

IBS symptoms tend to come and go over time and often overlap with other functional disorders such as fibromyalgia, headache, backache and genitourinary symptoms. [12] Psychiatric disorders are also more common in IBS, including bruxism, attention deficit, generalized anxiety, panic attacks, stress, reaction, somatization disorder, depression, adjustment reaction, and substance abuse.[4]

Stressful Life Events

Early life traumas, known to increase the risk of developing IBS later in life, play a major role in the development of mood and anxiety disorders and increased Corticotrophin-releasing factor signalling.[1] IBS patients have a higher prevalence of early adverse life events (EALs), or traumatic experiences during childhood including, but not limited to, maladjusted relationships with a parent or primary caregiver, severe illness or death of a parent, and physical, sexual, or emotional abuse.[4]

Risk Factors

GI infection is the strongest risk factor for IBS and is associated with fourfold increase in risk of IBS symptoms. The risk is even greater in those with pre-existing GI conditions such as GERD or dyspepsia, a history of more severe diarrhoea illness, younger age, female gender, chronic stressful life events, or psychological comorbidities. [4] Other risk factors for developing IBS include an affluent childhood environment, previous antibiotic use, food intolerance, extra-intestinal somatic symptoms, and poor QoL. IBS aggregates in families, and perinatal factors such as young maternal age, caesarian section, and low birth weight are also independently associated with IBS.[17]

Pathophysiology

Traditionally there is no known structural, anatomical, or physiologic abnormality that accounts for the symptoms that IBS sufferers experience.[17] The complex interaction between the brain, enteric nervous system, endocrine, and the immune system, which helps to regulate the bowel function, is called the brain gut or more recently the microbiome brain-gut axis.[18] IBS is a disorder of brain–gut function with a top-down effect of the brain driving the gut manifestations and in a subset of patients GI disturbances may be the underlying driver of the mood disorder.[8]

1) Altered gastrointestinal motility

Patients with IBS have greater small intestinal motor stimulation than controls.[17] Patients with IBS-D were known to have fast colonic propagated contractions, accelerated whole gut, and segmental colonic transit times and those with IBS-C were shown to have decreased giant migrating motor complexes.[19]

2) Enhanced visceral perception

A majority of patients with IBS have a visceral hypersensitivity as represented by lower pain thresholds to intestinal distension compared to healthy controls.[1] This altered and overly sensitive response may cause some of the symptoms that IBS patients have such as sensations of bloating, discomfort, and pain.[20]

3) Psychological factors

Stress is strongly associated with symptom onset and symptom severity in IBS patients. A history of emotional, sexual, or physical abuse is found in 30–50% of IBS patients.[1] But psychosocial factors are now considered to rather modulate the underlying pathophysiology of IBS, exacerbating the severity of GI symptoms and affecting health status and clinical outcomes alike for patients.[10]

4) Abnormal bile acid metabolism

Studies that have demonstrated higher levels of total fecal bile acid in those with IBS with diarrhoea, and lower levels in IBS with constipation.[8] Genes involved in bile acid metabolism and function have been reported to be associated with colonic transit in IBS--D.[3]

5) Central Neural Dysregulation

The role of central nervous system (CNS) factors in the pathogenesis of IBS is strongly suggested by the clinical association of emotional disorders and stress with symptom exacerbation.[12]IBS-D patients show evidence of enhanced adrenergic activation and IBS-C patients show decreased vagal tone. Both result in an imbalance favouring sympathetic over parasympathetic activity.[17]

6) Genetic Factors

Within families, a number of studies have reported clustering of IBS, and twin studies demonstrate heritability in the order of 40%.[21] Polymorphisms or variants in several genes have been found to be associated with IBS.[3]

7) Gut Microbiota

Both quantitative and qualitative alterations in intestinal bacterial microbiota have been reported. Small intestinal bacterial overgrowth (SIBO) may be present in some patients and lead to symptoms.[14] Microbiota abnormalities are associated with disruptions in gut transit and are also correlated with expression of host gene pathways implicated in impaired epithelial barrier function.[10]

8) Post Infectious Irritable Bowel Syndrome

IBS can occur after an enteric infection, where it is termed post infectious IBS (PI-IBS).[21] Women and patients with antibiotic exposure or psychological stress at the onset of gastroenteritis appear to be at increased risk for developing PI-IBS.[16]

9) Altered Immune Reactivity

IBS was traditionally thought not to be characterized by inflammation. New research is showing that IBS involves an inflammatory process as well. [20] Some patients with IBS display persistent signs of low-grade mucosal inflammation with activated lymphocytes, mast cells, and enhanced expression of pro-inflammatory cytokines.[12]

10) Abnormal Serotonin Pathways

Studies have shown increased concentration of serotonin (5-HT) in the platelet-depleted plasma of IBS patients compared to controls, particularly in IBS-D.[4] Postprandial plasma 5HT levels were significantly higher in this group of patients compared to healthy controls. Since serotonin plays an important role in the regulation of GI motility and visceral perception, the increased release of serotonin may contribute to the postprandial symptoms of these patients.[12]

11) Food Intolerance

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).[14] In addition, a change in diet can rapidly alter the microbiome. This combination of factors may be important in symptom generation in IBS.[17]

Clinical Presentation

Current guidelines recommend that the diagnosis of IBS should be positively made, based on characteristic symptoms, rather than by exclusion based on a battery of (negative) investigations.[21]

General Consideration

Postprandial symptoms are common in IBS. These symptoms were frequently flatulence and abdominal pain, which were more often triggered by foods rich in carbohydrates or fats, as well as coffee, alcohol, and spicy foods.[4] In assessing the patient with IBS, it is important not only to consider the primary presenting symptoms, but also to identify precipitating factors and other associated gastrointestinal and extra gastrointestinal symptoms.[13] Abnormal stool frequency (>3 bowel movements per day or <3 bowel movements per week), excessive straining during defaecation, urgency (having to rush to the toilet), feelings of incomplete evacuation and mucus with bowel movements support an IBS diagnosis.[3]

Abdominal Pain

IBS should not be diagnosed in the absence of abdominal pain.[17] Abdominal pain in IBS is highly variable in intensity and location. It is frequently episodic and crampy, but it may be superimposed on a background of constant ache. Pain may be mild enough to be ignored, or it may interfere with daily activities.[12] IBS-C and IBS-D patients have different symptom profiles, with IBS-C patients reporting more overall symptoms (both lower and upper abdominal pain) and particularly bloating. Pain associated with bowel movements is more common in IBS-D patients

than IBS-C patients.[4] The term discomfort included in the Rome III criteria is now eliminated from the new Rome IV criteria. Only abdominal pain is now included.[11]

Altered Bowel Habits

Alteration in bowel habits is the most consistent clinical feature in IBS.[12] These symptoms often are variable and intermittent, and patients can change from one stool pattern to another. An irregular stool consistency (abnormal stool form) is characteristic.[17] At first, constipation may be episodic, but eventually, it becomes continuous and increasingly intractable to treatment with laxatives.[12] In other patients, diarrhoea may be the predominant symptom. Diarrhoea resulting from IBS usually consists of small volumes of loose stools. Most patients have stool volumes of <200 millilitre. Nocturnal diarrhoea does not occur in IBS.[12]

Gas and Flatulence

Patients with IBS frequently complain of abdominal distention and increased belching or flatulence, all of which they attribute to increased gas.[12] Distention can be objectively measured, in contrast to bloating, which is subjective. The degree of distension tends to worsen toward the end of the day.[17]

Upper Gastrointestinal Symptoms

Between 25 and 50% of patients with IBS complain of dyspepsia, heartburn, nausea, and vomiting. This suggests that other areas of the gut apart from the colon may be involved.[12]

Extra Intestinal Symptoms

More than half of the additional visits and costs incurred by IBS patients are for non-GI concerns.[4] Extra intestinal symptoms including headache, backache, joint pains, impaired sleep, chronic fatigue, dizziness, palpitations, and dyspareunia are more common in IBS patients.[17]

Psychological Features

Psychiatric conditions including depression, anxiety, and somatization often coexist in IBS.[17] Most patients seen in general practice do not have psychological problems but about 50% of patients referred to hospital have a psychiatric illness. Panic attacks are also common.[14]

Alarm Features

Alarm features for IBS are symptoms that should raise the clinical concern of another gastrointestinal disease rather than IBS. Alarm symptoms can necessitate further investigations to rule out another gastrointestinal disease before an IBS diagnosis can be recommended. [3] Patients presenting with IBS-like symptoms who also report alarm features warrant prompt investigation. [14]

- Age >50 years
- Unintentional weight loss
- Nocturnal symptoms
- Recent change in bowel habit
- Palpable abdominal mass or lymphadenopathy
- Family history of colon cancer or inflammatory bowel disease (IBD)
- Anaemia
- Evidence of overt gastrointestinal bleeding

Physical Examination

A general examination is carried out for signs of systemic disease.[13] A digital rectal examination is a useful tool to identify patients with dyssynergic defaecation, which is important to exclude in patients with constipation as well as to exclude rectal cancer. Perianal inspection should also be part of the examination to rule out perianal fistulas and other relevant anal pathology.[3] Physical examination is generally unremarkable, with the exception of variable tenderness to palpation.[14]

Investigations

Most clinicians are able to recognize the symptoms of IBS and feel comfortable making the diagnosis. Using a combination of Rome clinical criteria and normal complete blood count and C-reactive protein is a reasonable approach to evaluation of suspected IBS. [4] An effort to keep investigations to a minimum is recommended in straightforward cases of IBS. Additional tests or investigations should be considered if alarm features are present. [13] Measurement of calprotectinin a stool sample by ELISA or immuno chromatography will differentiate IBS, where it is less than 50 microg/g stool, from IBD where it is usually much greater, reflecting inflammation and neutrophil infiltration of the gut.[22]

General Management

IBS tends to be a lifelong disorder, and establishment of a strong physician-patient relationship is key to providing the best clinical care.[17]

1) Diet

The majority of IBS patients perceive that symptoms are exacerbated by meals and that they have food intolerances.

However, many patients report an inconsistent symptom response to certain foods, and a 1–2-week food and symptom diary can aid in careful analysis of potential food triggers. Common food triggers include high-fat foods, raw fruits and vegetables, and caffeinated beverages.[4] The standard of care for IBS

typically has been a high-fiber diet. Fiber is not helpful for pain, but can benefit constipation and can sometimes firm up loose stools.[17] Dietary modification is one of the most common interventions in the management of IBS. Low- FODMAP, high-fiber, and low gas-producing foods are commonly recommended. [19]There are some unresolved issues with long-term use of a low FODMAP diet. These include the effect on symptoms of reintroduction of FODMAP-containing foods, which is recommended, and the consequences of the potentially deleterious effects of continued FODMAP restriction on the microbiome. [17]

2) Physical Activity

Physical activity might enhance GI transit, and thus is to be encouraged. Exercise has been shown to improve symptoms in IBS.[17] 20–60 min of moderate-to-vigorous activity 3–5 times weekly resulted in lower symptom severity after 12 weeks in comparison to usual activity.[4]

Homoeopathic Management

Homoeopathy is truly a holistic form of treatment, addressing not only the bowel symptoms, but also the psyche and the other extra-bowel symptoms that may be present in each individual and can play a beneficial role. There are many medicines available in the homoeopathic literature which can be selected on the basis of the presenting totality of each case for treatment of this syndrome. [23]

1. Antimonium crudum

Indigestion after a huge meal along with alternate constipation and diarrhoea. [23] Gastric and intestinal complaints from bread and pastry, acids.[26] Diarrhoea alternates with constipation. [27] Bloating after eating. [25]

2. Argentum nitricum

Indicated in gastrointestinal conditions accompanied by nervousness and anxiety.[23]Gastric troubles of brain workers or businessman.Apprehension; fears or shocks strike at the pit of stomach. [24] Upper abdominal affections brought on by undue mental exertion. Belching accompanies most gastric ailments. Enormous distention. [25]

3. Arsenicum album

Intolerable abdominal pain with diarrhoea, restlessness & excessive thirst in sips. [23] Stool after eating and drinking; from chilling stomach. [25] Dysentery is most distressing and frequent urging to stool, scanty, slimy, black, fluid, inky stools with cadaveric smell.[27]

4. Cinchona officinalis

Indicated in persons who suffer from painless watery diarrhoea with great bloating, indigestion, and general weakness. [23] Excessive flatulence of stomach and bowels; fermentation, borborygmus, belching gives no relief. [26] Flatulent distension almost to bursting. Fermentation after eating fruit. Diarrhoea comes on gradually. Stools more and more watery.[27]

5. Lycopodium clavatum

Indicated in dyspepsia with great flatulence and fermentation. Fullness not relieved by belching. [23] Flatulent, distended like a drum, can hardly breathe. After a mere mouthful becomes flatulent and distended, cannot eat any more.[27] Constipation when away from home; with ineffectual urging.[26]

6. Natrum carbonicum

Indicated in persons with very weak digestion, caused by slightest error in diet. [23] Digestion is difficult, and milk will not digest at all, bringing on a diarrhoea with undigested, lienteric stools. Many symptoms from drinking cold water when overheated.[27] Very weak digestion, caused by slightest error of diet.[25]

7. Nux vomica

Nausea in the morning, after eating. Weight and pain in stomach; worse, eating, sometime after. Alternate constipation and diarrhoea-after abuse of purgatives. [25] In constipation the more he strains the harder it is to pass a stool. In diarrhoea and dysentery there is straining without relief, but as soon as he passes a little stool there is relief.[27]

8. Pulsatilla nigricans

Apprehension in pit of stomach. Gastric symptoms < morning, mental symptoms < evening. [24] Many pains in the stomach when empty orfull. The bloating, the gas and the sour stomach are most striking.[27] Diarrhoea: watery, greenish-yellow, very changeable; soon as they eat; from fruit, cold food or drinks, ice-cream.[26]

9. Staphysagria

IBS caused by suppressed anger. [23] Very sensitive to slight mental impressions; least action or harmless words offend.[26] Subject to chronic diarrhoea and to constipation.[27] Diarrhoea after drinking cold water, with tenesmus.[25]

10. Sulphur

Indicated in complete loss of or excessive appetite. [23] Constipation: stools hard, knotty, dry as if burnt; large, painful; alternating with diarrhoea. [26] Complete loss of, or excessive appetite.Very sensitive to pressure; internal feeling of rawness and soreness. [27]

CONCLUSION

IBS is associated with a significant impairment in quality of life, a high rate of absence from work, and a significant increase in healthcare costs. Symptom-based criteria have been developed for the purpose of differentiating patients with IBS from those with organic diseases. As there is no single

pathophysiological abnormality that explains all the symptoms of IBS, there is no specific target for medical therapies. Symptoms sometimes seem to be precipitated by major life events, or occur during a period of considerable stress. If a satisfactory outcome is to be expected, the behaviour components of IBS must be identified and treated. This suggests the necessity for tailored treatment for each individual patient. IBS relates to the patient's interpretation and reporting of an illness experience, and it is classified primarily in terms of symptoms that are to be reported by the patient as being different from normal and mayor may not be interpreted as meaningful. The principles and practice of homoeopathic treatment overlap across these aspects of IBS for it prioritizes patient's subjective mental symptoms and seeks to provide tailored treatment for each individual patient.

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