

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Irritable Bowel Syndrome (IBS)

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Definition

- Irritable bowel syndrome (IBS) is a chronic, relapsing and often life-long disorder.

It is characterized by the presence of abdominal pain or discomfort, which may be associated with

defecation and/or accompanied by a change in bowel habit.

- Symptoms may include disordered defecation (constipation or diarrhea or both) and abdominal

distension, usually referred to as bloating.

- Symptoms sometimes overlap with other gastrointestinal disorders such as non-ulcer dyspepsia or coeliac disease

Prevalence

- IBS is a highly prevalent, that significantly reduces patients' quality of life.
- IBS mainly occurs between the ages of **15** and **65** years.
- The first presentation of patients to a physician is usually in the **30–50-year-old** age group.
- IBS affects **9-23%** of the population worldwide.
- Women are two to four times more likely to develop IBS than men



Etiopathogenesis

IBS is a common digestive disorder whose pathophysiology is not fully understood, but factors may be involved in its pathogenesis.

○Genetic predisposition

- A positive family history for IBS is present in 33% of patients.
- Having a parent with IBS is a greater predictive factor for IBS.
- studies have investigated the possible role of gene polymorphisms coding for anti-inflammatory and pro-inflammatory interleukins, alpha 2 adrenergic receptors, serotonin (SERT) and cholecystikinin (CCK) receptors.
- There is a significant correlation between SERT polymorphisms and IBS symptom severity

Etiopathogenesis

○ Altered intestinal motility

- Environmental stress or strong emotion via the brain–gut axis can lead to dysmotility throughout the small and large intestine.
- Small bowel dysmotility manifests as accelerated meal transit in patients prone to diarrhea and in delayed meal transit in patients prone to constipation.
- It has been observed that plasma serotonin concentrations are reduced in IBS patients with constipation, but raised in those with diarrhea.

○ Intestinal hypersensitivity

Intestinal hypersensitivity is a multifactorial process that may occur within the PNS or CNS and plays a principal role in the etiology of IBS.

Etiopathogenesis

- Psychological distress and disorders; sexual abuse
 - Psychological disorders can affect the brain-gut axis, promoting the release of corticotropin-releasing hormone, which is able to influence mood, digestive motility, visceral sensitivity and inflammatory pathways via neuroendocrine and autonomic outflows.
 - Stress in IBS patients increases the levels of pro-inflammatory interleukins, activating both the hypothalamic-autonomic nervous system and the hypothalamic- pituitary-adrenal (HPA) axes and consequently increases the serological adreno-cortico-tropic-hormone and cortisol levels.
- Enteric infection/inflammation
 - The mechanisms that cause postinfectious IBS are unknown but could include residual inflammation or persistent changes in mucosal immunocytes, enterochromaffin and mast cells, enteric nerves, and the gastrointestinal microbiota.

Etiopathogenesis

- **Altered gut microbiota**

- The microbiota is altered in IBS and such changes may contribute to the pathogenesis of this disorder.
- Lactobacilli and bifidobacterial were found to be decreased in IBS patients, and their activities were found to be heavily compromised.
- Furthermore, there is evidence that probiotics can affect intestinal fermentation and stabilize microbiota, normalising the relationship between pro- and anti-inflammatory cytokines.
- This results has a beneficial effect on intestinal inflammation, permeability and visceral sensitivity.

- **Altered intestinal immunity**

- **Food intolerance**

**حوادث نامطلوب
اولیه زندگی و محیط زندگی**

محیط اجتماعی
• روانی
• عفونی
• غذا

روانی اجتماعی
• پریشانی
• آسیب شناسی روانی

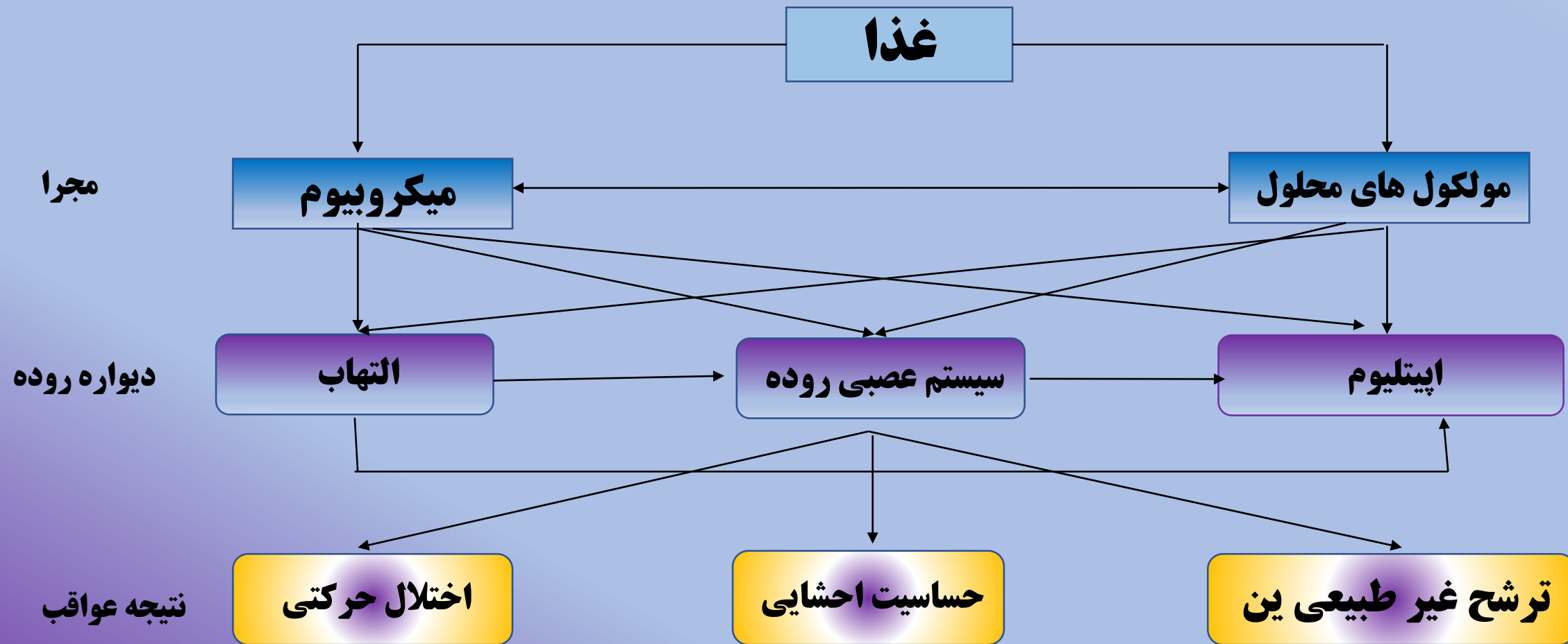
فیزیولوژی
• حساسیت احشایی
• فعال سازی سیستم ایمنی
• نفوذپذیری
• میکروفلور

سیستم عصبی روده

سیستم عصبی مرکزی

سندروم روده تحریک پذیر
• علائم
• رفتار

مکانیسم بلقوه تحریک و تشدید علائم در ارتباط با غذا



Classification

Four bowel patterns may be seen with IBS, and these remain in the Rome IV classification

- IBS-D (diarrhoea predominant)
- IBS-C (constipation predominant)
- IBS-M (mixed diarrhoea and constipation)
- IBS-U (unclassified; the symptoms cannot be categorized into one of the above three subtypes)



Patients may experience a change from one IBS subtype to another with time.



Clinical manifestation

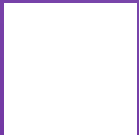
- Discomfort or abdominal pain relieved by defecation
- Many factors, such as emotional stress and eating, may exacerbate the pain.
- Bloating or a feeling of abdominal distension are very frequent complaints in IBS.
- Altered bowel habits, (diarrhea, constipation, or alternating diarrhea and constipation)
- Experience episodes of symptom exacerbation, followed by periods of remission.
- Sensation of incomplete evacuation



Clinical manifestation

- Dysphagia, dyspepsia, nausea and non-cardiac chest pain.
- Fibromyalgia, chronic fatigue syndrome, temporomandibular joint disorder and chronic pelvic pain are nongastrointestinal disorders with a well-documented association with IBS.
- Psychiatric disorders including major depression, anxiety and somatoform disorders.

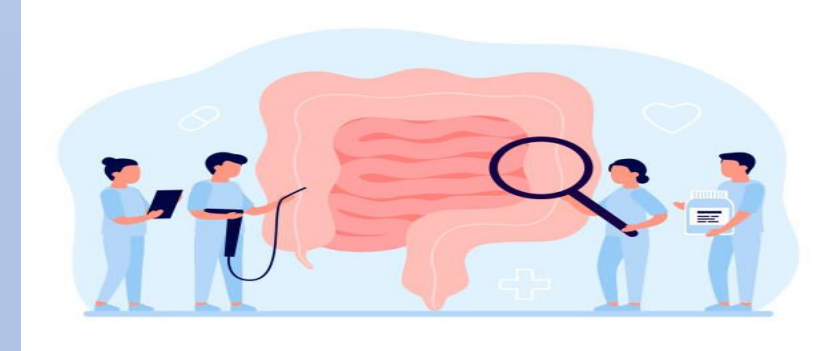
It is important to recognize these symptoms as part of the IBS symptomatology and avoid unnecessary additional specialist examinations.



Rome IV Criteria for Diagnosing IBS

Recurrent abdominal pain at least 1 day/week in the last 3 months, with at least two of the following criteria:

- Related to defecation
- Associated with a change in frequency of stool
- Associated with a change in form (appearance) of stool



The criteria should be met for the last 3 months and the symptoms begin at least 6 months before diagnosis.

Other features such as lethargy, nausea, backache and bladder symptoms are common in people with IBS, and may be used to support the diagnosis

Manning criteria for the diagnosis of IBS

- Pain relieved with defecation
- More frequent stools at the onset of pain
- Looser stools at the onset of pain
- Visible abdominal distention
- Passage of mucus
- Sensation of incomplete evacuation



Red flag signs:

- Age > 50 years
- Weight loss
- Blood in stools
- Anemia
- Fever

Differential diagnosis

- Celiac spure/ gluten enteropathy
- Lactose intolerance
- IBD
- Colorectal carcinoma
- Acute diarrhea
- Small-intestinal bacterial overgrowth (SIBO)
- Diverticulitis
- Pelvic inflammatory disease/ Endometriosis



Facts

In patients who meet the diagnostic criteria for IBS, other digestive diseases should be excluded, and the following investigations be undertaken:

- blood count,
- biochemical and inflammatory markers
- immunological tests for celiac disease

Facts

The following investigations in patients with IBS unnecessary:

- ultrasound scanning of the abdomen,
- rectosigmoidoscopy or colonoscopy or irrography,
- thyroid and parathyroid analysis,
- stool analysis (parasites, bacteria, in particular Clostridium difficile toxin, and possibly Giardia antigen, occult bleeding test Lactose intolerance).

The decision to undertake further investigations is dependent on the presence of other risk factors or alarming symptoms

Facts

- For individuals aged less than 50 years, that meet the criteria for IBS, there should be no further bowel examination if the following features aren't present: weight loss, hypochromic anemia and/or family history of certain GI illnesses.
- In patients with IBS-D, a differential diagnostic that includes the following should be considered: microscopic colitis, ulcerative colitis, Crohn's disease, celiac disease, Giardiasis, lactose malabsorption, tropical sprue, bacterial small bowel contamination, malabsorption of bile salts and colorectal cancer.

An illustration of a woman with long dark hair, wearing an orange t-shirt and dark blue shorts, performing a side stretch. She is standing with her feet apart, leaning her torso to her right side, and reaching her right arm over her head. The background features stylized green foliage and a light blue cloud-like shape. The entire illustration is set against a white background with a blue border.

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- An illustration of a woman with long dark hair, wearing a yellow shirt and a green skirt, standing with her hand to her chin in a thinking pose. Above her head is a large question mark. Surrounding her is a blue cloud-like shape filled with various food items, including an avocado, a lemon slice, a hard-boiled egg, a carrot, a tomato slice, a cucumber, a pepper, a banana, a donut, a slice of pizza, a sandwich, a glass of juice, and a smartphone.

Treatment

○ Pharmacological treatment

- Laxatives
- Antidiarrhoeals
- Antispasmodics
- Probiotics
- Fecal microbiota transplantation
- Serotonin receptor agonists and antagonists
- Psychological therapies
- Anti-inflammatory therapies

Clinical Guidelines for modifying nutritional intake in IBS patients

- Eat regular meals and allow enough time for them
- Drink at least 8 glasses of fluids, particularly water or other non-caffienated drinks during the day.
- Restrict coffee or tea to 3 cups per day.
- When it hasn't led to an improvement, limit the intake of high-fiber foods (such as wholemeal flour and breads, cereals high in bran, and whole grains such as brown rice).
- Reduce the intake of “resistant starch” Limit the intake of fresh fruit to 3 portions per day
- Reduce the intake of alcohol and fizzy drinks.
- In IBS-D avoid the artificial sweetener Sorbitol
- In cases of bloating or flatulance oats may be helpful

PROGNOSIS

In most patients with IBS symptoms persists but they do not worsen, while the rest may experience worsening or complete resolution. Factors that may contribute to a poor prognosis include:

- Uncertainty or doubt with regards to the effect of medicinal therapy
- Damage to the bowel as a result of existing symptoms
- Long standing IBS
- Chronic stress exposure
- Comorbidity of psychiatric illnesses

Thank
You

