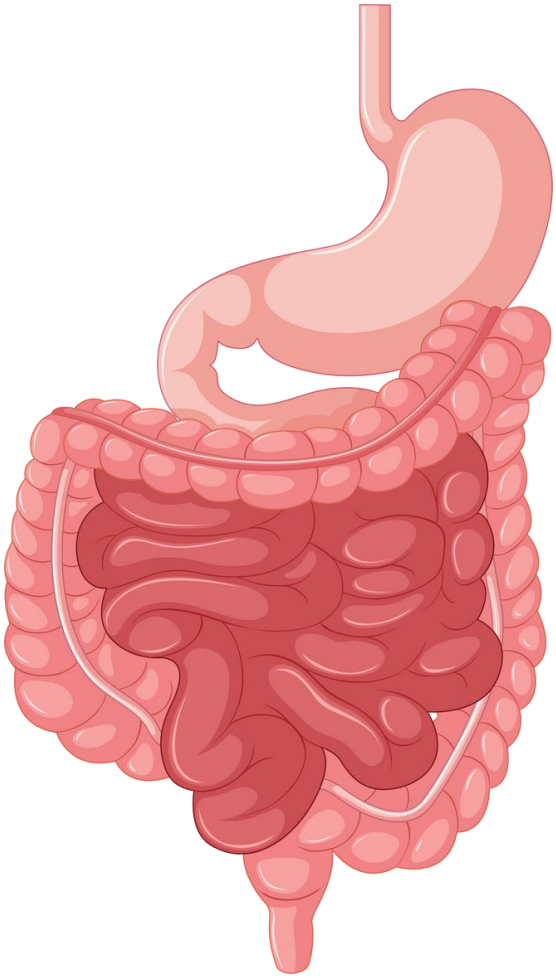
Mohammed AlEssa
Abdulaziz AlFuhayd
Reviewed by
Lama AlMutairi

medicine 443

GNT443

Irritable bowel syndrome



Editing File

Color index:

Main text (Black)

Female slides (Pink)

Male slides (Blue)

Important things (Red)

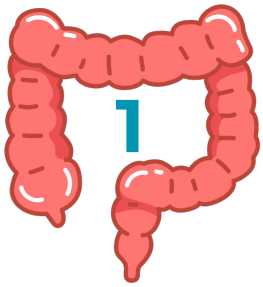
Dr's notes (Green)

Extra information (Grey)

OBJECTIVES

- Understand the hypothesis explain the pathophysiology of IBS.
- Common sign and symptoms.
- Rome III criteria of diagnosis.
- Introduction to management of IBS.

Recommended Video



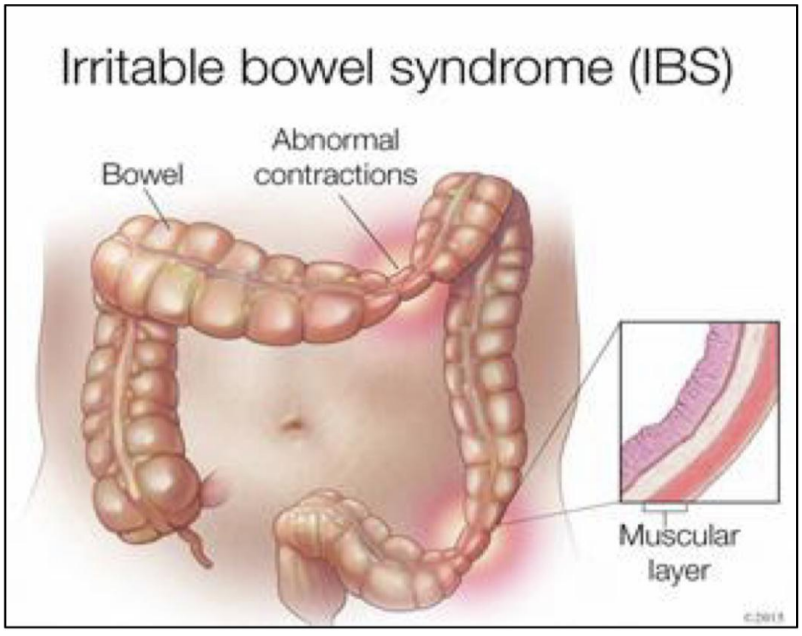
Irritable bowel syndrome

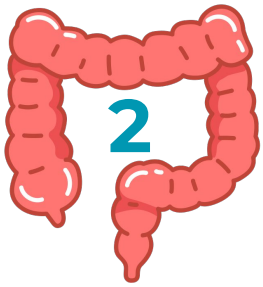
Irritable bowel syndrome (IBS):

Is a gastrointestinal disorder characterized by chronic abdominal pain and altered bowel habits in the **absence of any organic cause.**

(The doctor said that diagnosing it is difficult because its symptoms are similar to many diseases)

1. It is the most commonly diagnosed gastrointestinal condition.
2. The pathophysiology of IBS remains **uncertain.**
   - there are interactions with other things like genetics, environment & food
3. It is viewed as a disorder resulting from an interaction among a number of factors.





2 Pathophysiology of IBS

1-Gastrointestinal motility

motor abnormalities of the GI tract are detectable in some patients with IBS.

Some people have constipation due to low motility, While some people have diarrhea due to fast motility.

Abnormalities observed include:

- increased frequency and irregularity of luminal **contractions**
- prolonged **transit** time in constipation-predominant IBS

Visceral hypersensitivity

2

• Visceral hypersensitivity (increased sensation in response to stimuli) is a frequent finding in IBS patients.

• Perception in the gastrointestinal (Gl) tract results from stimulation of various receptors in the gut wall. These receptors transmit signals via afferent neural pathways to the dorsal horn (DRG) of the spinal cord and ultimately to the brain.

Neurons in their GIT are more sensitive to bloating & distention.

Distention

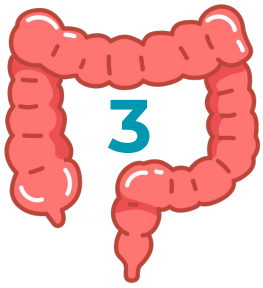
3

Various studies have shown that in patients with IBS, awareness and pain caused by balloon distention in the intestine are experienced at lower balloon volumes compared with controls.

Bloating

4

About half of patients with IBS (mainly those with constipation) have measurable increase in abdominal girth associated with bloating (sensation of abdominal fullness).



3 Pathophysiology of IBS

5

It is unclear whether heightened sensitivity of the intestines to normal sensations is mediated by the **local** Gl nervous system, or by **central** modulation from the brain, or by some combination of the two.

6- Intestinal inflammation

1-Increased numbers of lymphocytes have been reported in the colon and small intestine in patients with IBS (Inflammation around neurons)

2-Increase in lymphocyte infiltration in the myenteric plexus in nine patients and neuron degeneration in six patients.

3-Lymphocytes release mediators (nitric oxide, histamine and proteases) capable of stimulating the enteric nervous system, leading to abnormal motor and visceral responses within the intestine.

Postinfectious

7

What the Dr said about post infectious IBS in this slide: "It is well announced especially after E.coli infection. Usually it only stays for 6 weeks after the gastroenteritis. But, they have similar symptoms to IBS. That's why some of the experts said maybe IBS is a post infection disease were they have gastroenteritis or microbiotic effect on the neurons of the GIT. therefore, effecting the symptoms of the patient." from team 442

Alteration in fecal microflora

8

- Change in gut microbiota: (it change GIT symptoms especially with IBS)
  Emerging data suggest that the fecal microbiota in individuals with IBS differ from healthy controls and varies with the predominant symptom.
- Bacterial Overgrowth (Causes more symptoms)

1-Could be done by giving bacteria itself (giving good bacteria that will make the patient feel better).
Or we give them prebiotics which are the food that stimulate.
2-Bacterial Overgrowth Cause more symptoms the growth of normal bacteria.

Food sensitivity

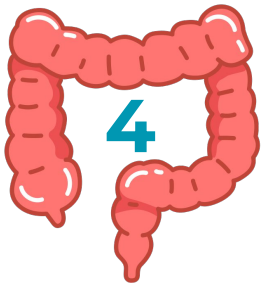
9

There are no tests that determine what a patient is sensitive to.

Psychosocial dysfunction

10

Psychosocial factors may influence the expression of IBS. (Increase symptoms)



Clinical features

Clinical features

1. Younger patients and women are more likely to be diagnosed with IBS
2. 2:1 female predominance in North America
3. In china male are more common to have IBS

Signs & symptoms

1. Chronic abdominal pain
2. Altered bowel habits
3. Diarrhea
4. Constipation
5. Other **gastrointestinal symptoms**: Upper gastrointestinal symptoms; including gastroesophageal reflux (GERD), dysphagia, early satiety, intermittent dyspepsia, nausea, and non-cardiac chest pain, are common in patients with IBS.

Subtypes of IBS

IBS with constipation

hard or lumpy stools ≥25% , loose or watery stools <25% of bowel movements

IBS with diarrhea

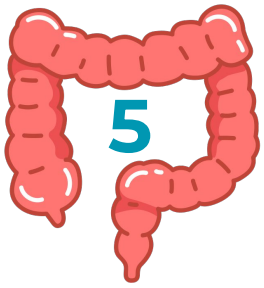
loose or watery stools ≥25%, hard or lumpy stools <5% of bowel movements

Mixed IBS

hard or lumpy stools ≥25%, loose or watery stools ≥25% of bowel movements

Unsubtyped IBS

Insufficient abnormality of stool consistency to meet the others subtypes



Diagnosis of IBS

Diagnostic Criteria

Rome III	Rome IV
Recurrent abdominal pain or discomfort at least 3 days per month in the last 3 months associated with 2 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. **Note:** This was mentioned in Team 442 but is not mentioned in this year, **but you must focus on it because it is mentioned as objective.**	Recurrent abdominal pain occurring on average at least 1 day per week in the last 3 months and associated with two or more of the following criteria: ● Improvement with defecation. ● Onset associated with a change in frequency of stool. ● Onset associated with a change in form (appearance) of stool. **Note:** This mentioned in this year, **you must focus on.**

Diagnostic Approach

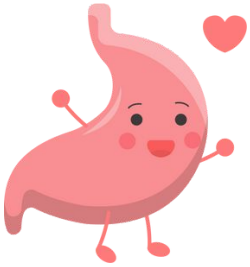
Patients are identified as having a symptom complex compatible with IBS based upon the Rome III criteria.
● Routine laboratory studies (complete blood count(CBC) to make sure the patient has no anemia , chemistries) are normal in IBS.
● NO red flag symptoms:
1-Rectal bleeding
2-Nocturnal or progressive abdominal pain
3-Weight loss (less than 10% of weight over the last 6 months)

Management

IBS is a chronic condition with no known cure.
● The focus of treatment should be on relief of symptoms and in addressing the patient's concerns.
● Therapeutic relationship
● Patient education
● Dietary modification (According to the symptoms)
● Psychosocial therapies
● Medications: antidepressants medications (For patients who we cannot control their symptoms)

Mainly Tricyclic antidepressants (TCAs)
1-Sometimes SSRIs due to less side effects.
2-Other medications mainly symptomatic medications like antispasmodic.

The doctor said that when we give a patient antidepressants, that does not mean that we mean he suffers from psychological illnesses, but rather that we are targeting the nerves in the GIT.



MCQ

Q1

What could be management of IBS?

- A- Corticosteroid.
- B- Dietary modification.
- C- Antibiotic.
- D- A&C.

Q2

Who is more likely to have IBS?

- A- 22 years old male has abdominal discomfort daily for 3 months with anemia.
- B- 25 years old female with abdominal pain and weight loss 2kg over 6 months.
- C- 27 years old female has bloody diarrhea for 3 months.
- D- 53 years old male with abdominal discomfort.

Q3

What is the difference between Rome III and Rome IV?

- A- Abdominal pain twice a week at least for 3 months.
- B- Abdominal pain with severity rate of 5/10.
- C- Abdominal pain without nocturnal abdominal pain.
- D- Abdominal Pain once a week for 3 months.

1-B 2-B 3-D

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Leader

عبدالعزيز أباحسين

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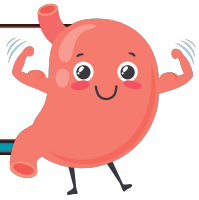
غيداء الدوسري



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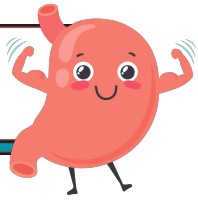

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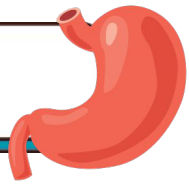

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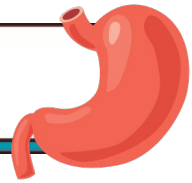

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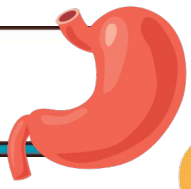

Member

عبدالعزيز الحميدي