

IRRITABLE
BOWEL
SYNDROME

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Definition of Irritable Bowel Syndrome

- IBS is a **functional** bowel disorder in which **abdominal pain** or **discomfort** is associated with **defecation** or a **change in bowel habit**.
- Bloating, distension, and disordered defecation are commonly associated features.

Epidemiology

- IBS mainly occurs **between the ages of 15 and 65**.
- The **first presentation** of patients to a physician is **usually in the 30-50-year-old age group**.
- In some cases, symptoms may date back to childhood.
- The prevalence is **greater in women** – although this result is not reproduced in India.
- There is a decrease in reporting frequency among older individuals.

- The estimated prevalence of IBS in children is similar to that in adults.
- Typical IBS symptoms are common in “healthy” population samples.
- Europe and North America is estimated to be 10-15%.
- The prevalence of IBS in Asia Pacific region is increasing, particularly in countries with developing economies : 0.82-22.1%.

IRRITABLE BOWEL SYNDROME

- Kriteria diagnosis* menurut Rome III

Nyeri atau ketidaknyamanan abdomen berulang setidaknya **tiga hari per bulan pada 3 bulan terakhir, disertai dengan dua atau lebih** kejadian berikut ini:

1. Terjadi **perbaikan dengan BAB**
2. **Onset** berkaitan dengan **perubahan frekuensi BAB**
3. **Onset** berkaitan dengan **perubahan bentuk feses**

*Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis.

Pathophysiology/etiology of IBS

- Psychosocial factors
- Increased visceral sensitivity (role of mediators including 5-HT, bradykinin, tachykinin, CGRP, and neurotropins)
- Intestinal motility disorders
- Physiological factor through the brain (Brain-Gut axis)
- Hereditary
- Infection/inflammation factor
- Intestinal microflora factor

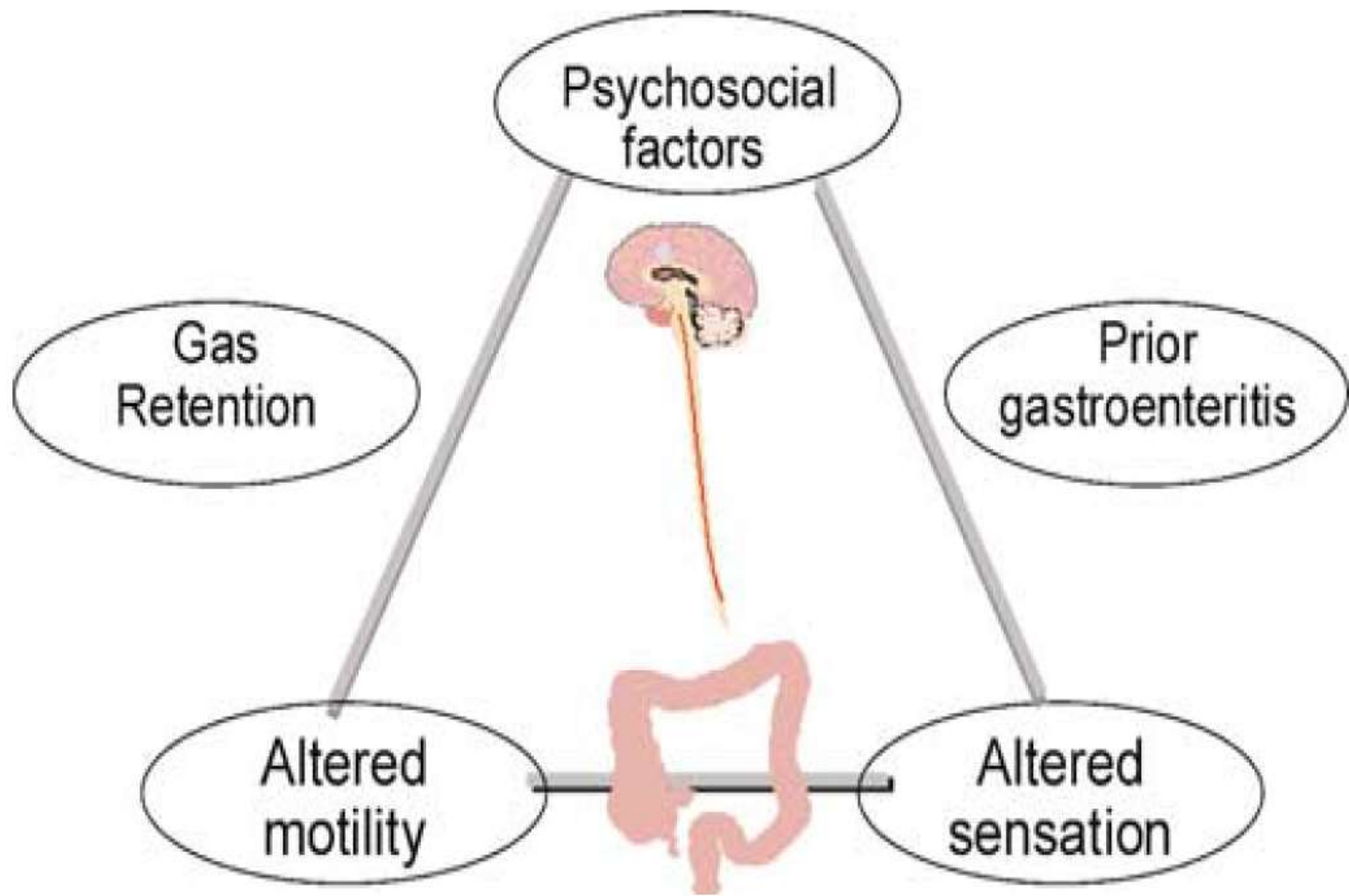


Figure 3 Pathophysiology of irritable bowel syndrome.

IBS diagnostic algorithm

Possible IBS

Recurrent abdominal pain, bloating, or other discomfort for ≥ 3 months associated with 1 or more of the following:

- relief with defecation
- change in stool form (show patient the Bristol Stool Scale)
- change in stool frequency

Alarm features

- patient age 45 years or older
- blood in stools
- unintended weight loss
- nocturnal symptoms
- fever
- abdominal mass
- ascites
- family history of colorectal cancer
- presence of anemia

Probable IBS

Explain IBS
Treat primary symptoms

New symptoms or
alarm features (+)

Repeat visit within 6 weeks
Check for new symptoms
Review alarm features
Continue treatment as necessary or modify

Laboratory results

- anemia
- leukocytosis
- high ESR, CRP
- abnormal blood chemistry
- fecal occult blood positive

New symptoms,
alarm features, or
refractory symptoms (+)

Repeat visit within 6 weeks
Check for new symptoms
Review alarm features
Still symptomatic

Refer to
gastroenterologist

Figure 1 Diagnostic algorithm for irritable bowel syndrome (IBS). CRP, C-reactive protein; ESR, erythrocyte sedimentation rate.

Additional tests or exams

- In the majority of cases of IBS, no additional tests are required.
- Consider additional tests if warning signs “red flags” are present → see page before
- Although commonly performed, full blood counts, serum biochemistry, thyroid function tests, and stool testing for occult blood and ova and parasites are indicated only if supported by clinical history and where locally relevant.

Differential diagnose of IBS

- Celiac sprue/gluten enteropathy
- Lactose intolerance
- Inflammatory bowel disease
- Colorectal carcinoma
- Lymphocytic and collagenous colitis
- Acute diarrhea due to protozoa or bacteria
- Small-intestinal bacterial overgrowth (SIBO)
- Diverticulitis
- Endometriosis
- Pelvic inflammatory disease
- Ovarian cancer

Management of IBS

- Management should be individualised and should target all bothersome symptoms, while taking into account specific IBS subtypes, symptom severity, and contributing factors (including psychosocial issues).
- Suggested initial treatments for patients with IBS include various combinations of antispasmodics, laxatives, prokinetic, antidiarrheal, and probiotic agents.

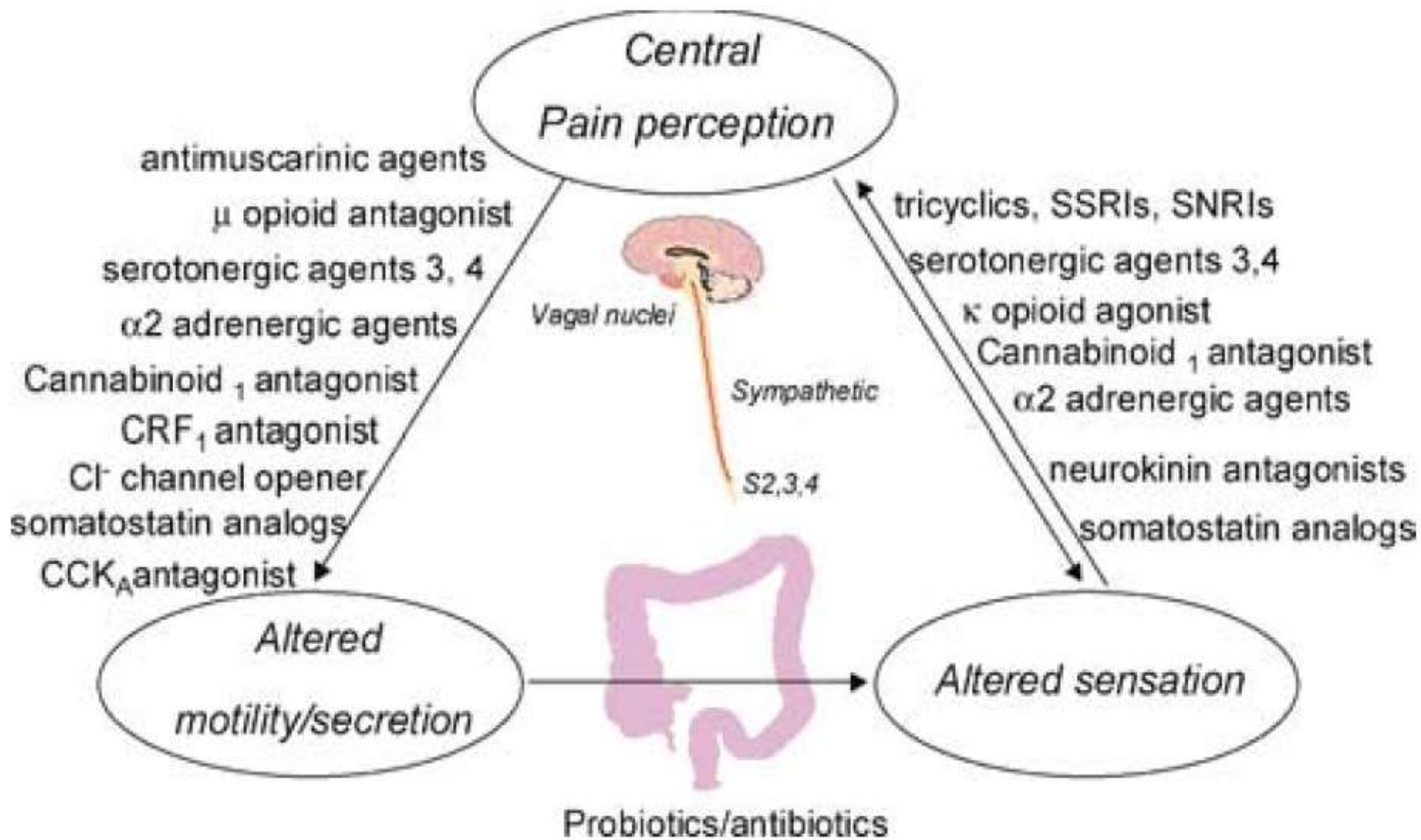


Figure 5 The pipeline in IBS. Candidate medications and possible mechanisms of action.

Manajemen

- Edukasi pasien
- Diet
- Farmakoterapi
- Psikoterapi/Terapi kognitif dan tingkah laku
- Hipnoterapi

Pengobatan IBS

- Abdominal pain/discomfort

Antispasmodics, antidepressants (TCAs/SSRIs)

- Constipation

Fiber, laxatives, PEG solutions

- Diarrhea

Opioids (loperamide), Cholestyramine

- Bloating and distention

Antiflatulents, antispasmodics, dietary modification

In one meta-analysis,¹⁵⁸ five drugs showed efficacy over placebo in irritable bowel syndrome: cimetropium bromide, an antimuscarinic compound; pinaverium bromide and octylonium or otilinium bromide, quaternary ammonium derivatives with calcium antagonist properties; trimebutine, a peripheral opiate antagonist; and mebeverine, a derivative of beta-phenyl-ethylamine that has anticholinergic activity. In

5-Hydroxytryptamine-3 or serotonin type 3 receptor (5-HT₃) antagonists

Examples of medications in this class include ondansetron, granisetron, alosetron and cilansetron. The most thoroughly characterized agent to date is alosetron hydrochloride. Alosetron is a selective 5-HT₃ antagonist that was approved for the treatment of women with irritable bowel syndrome whose predominant bowel symptom was diarrhoea. 5-HT₃ receptors are cation

channels that modulate visceral pain, colonic transit and gastrointestinal secretion. Alosetron delays colonic transit²⁰¹ and reduces colonic sensation in irritable bowel syndrome patients with diarrhoea.²⁰² Alosetron reduced arterial hypotension in response to noxious colorectal distensions in experimental animal models of visceral pain.²⁰³

Phase III studies have assessed the efficacy and safety of tegaserod vs. placebo in more than 2500 patients with irritable bowel syndrome and the symptom of constipation in randomized double-blind trials of up to 16 weeks' duration. Tegaserod (6 mg b.d.) resulted in a significant increase in the proportion of irritable bowel syndrome patients achieving a satisfactory subject's global assessment of relief compared with placebo. The unadjusted response rate for pooled data from three

trials was 49.5% vs. 36.6% for placebo ($P < 0.001$), and the onset of relief was usually rapid, with many patients responding in the first few days of treatment.²¹⁷⁻²¹⁹ Compared with placebo, tegaserod also improved bowel function, i.e. increased stool frequency and consistency^{217, 220} and reduced the percentage of days with hard/very hard stools.²²¹ The overall efficacy of tegaserod was driven by the favourable response in women. However, the number of men in the trials was small and larger studies are required.

Somatostatin (SST) has been used for many years as an antisecretory agent for various types of chronic diarrhoea, including IBS, but later research has suggested a potential broader function of SST analogues in FGIDs.⁹²⁻⁹⁶ SST receptors are localized both in the periphery (including the GI tract) and the CNS, and SST receptor-mediated signalling is involved in pain modulation, as well as vascular, neuroendocrine, neuronal and autonomic responses.⁹⁷

In humans, octreotide, a non-selective SST2, SST3 and SST5 receptor agonist, has been demonstrated to have potent visceranalgesic,⁹⁹⁻¹⁰¹ as well as GI motility, effect.¹⁰² Several pharmacodynamic studies have shown an effect of one-time dosing of octreotide on the perception of rectal, colonic and gastric distension without affecting tone or compliance.^{99-101, 103-106}

OCREOTIDE WAS FOUND TO REDUCE THE ABDOMINAL COMPLAINTS AND IMPROVE THE STOOL CONSISTENCY

conclusions

- IBS is a chronic, relapsing and often life-long disorder, characterised by the presence of abdominal pain or discomfort, which maybe associated with defecation and/or accompanied by bowel habit change.
- No pathophysiological substrate has been demonstrated in IBS.
- There is still a problem to make a diagnosis of IBS, and when to refer to secondary healthcare.
- The treatment should be multidisciplinary, including education, doctor-patient relationship, dietary modification, pharmacotherapy.