DYLIK, Adrianna, GRYCZYŃSKA, Weronika, MUSIAŁ, Mikołaj, KRAWCZAK, Łukasz, GULACZYK, Hanna, SPYCHALSKI, Jan, KACZMAREK, Mikołaj, GROCHOWSKA, Wiktoria and SPYCHALSKA, Maria. IBS as a diverse disease. A comprehensive review. Journal of Education, Health and Sport. 2025;77:57134. eISSN 2391-8306.
https://doi.org/10.12775/JEHS.2025.77.57134
https://apcz.umk.pl/JEHS/article/view/57134

The journal has had 40 points in Minister of Science and Higher Education of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of 05.01.2024 No. 32318. Has a Journal's Unique Identifier: 201159. Scientific disciplines assigned: Physical culture sciences (Field of medical and health sciences); Health Sciences (Field of medical and health sciences).
Punkty Ministerialne 40 punktów. Załącznik do komunikatu Ministra Nauki i Szkolnictwa Wyższego z dnia 05.01.2024 Lp. 32318. Posiada Unikatowy Identyfikator Czasopisma: 201159. Przypisane dyscypliny naukowe: Nauki o kulturze fizycznej (Dziedzina nauk medycznych i nauk o zdrowiu); Nauki o zdrowiu (Dziedzina nauk medycznych i nauk o zdrowiu).
The authors declare that there is no conflict of interests regarding the publication of this paper.
Received: 18.12.2024. Revised: 13.01.2025. Accepted: 22.01.2025. Published: 30.01.2025.

IBS as a diverse disease. A comprehensive review.

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ABSTRACT

Introduction: Irritable Bowel Syndrome is one of the most popular diseases among the gastrointestinal difficulties. The main problem is lower quality of life because of troublesome symptoms of the disease.

Aim of the study: This review seeks to consolidate the current understanding of IBS, emphasizing the prevalence of this condition and the persistent challenges in achieving a definitive understanding, even after decades of research. The primary objective is to highlight contemporary approaches to patient care, revisiting both pharmacological and non-pharmacological treatment strategies.

Materials and methods: The analysis is based on a thorough review of peer-reviewed literature published between 2020 and 2025, ensuring the inclusion of the most up-to-date insights.

Knowledge was sourced from PubMed using the advanced search with terms „irritable bowel syndrome" with „or" and „IBS", ultimately returning 1,228 results.

Results and conclusion: The findings underscore the necessity of a multidisciplinary approach involving a team of specialists to provide comprehensive care. Additionally, a crucial factor is the patient's diet and overall well-being, which play a pivotal role in determining the progression and course of the condition. Furthermore, a clear conclusion has been established that, the psychological dimension—integral to both the disease and its management—emerges as a critical factor that warrants careful consideration and should not be underestimated.

Key words: IBS, diet, treatment, psychology

INTRODUCTION

According to worldwide overview on the statistics of Irritable Bowel Syndrome (IBS), it is estimated that, up to 10% of people suffer from this disease (Mayer, Ryu, and Bhatt 2023)(Mayer, Ryu, and Bhatt 2023). IBS is one of the most common disorders affecting gastrointestinal tract, especially stomach and intestines (Sebastián Domingo 2022). The main problem concerns the gut–brain interaction resulting in seemingly lowering quality of life and increasing healthcare costs (Cheng et al. 2024). Typical symptoms presented by patients include overall change in bowel movements, abdominal chronic pain and bloating (Nelkowska 2020). Due to the raising awareness of IBS the aim of the study is to sum up the knowledge.

EXTERNAL FACTORS AND COMORBIDITIES

Irritable Bowel Syndrome (IBS) is a complex condition influenced by a range of psychological, physiological and environmental factors. Patients diagnosed with IBS are mainly at risk for psychological disorders such as depression (Banerjee et al. 2024), anxiety or personality disorders. Studies clearly indicate that a significant proportion of patients suffer from the above-mentioned illnesses. Patients, moreover, complain of associated sleep disorders

resulting in a significant decrease in quality of life, compounding the already present problems associated with IBS itself (Grover et al. 2021). Clinical records indicate that up to 29% of patients with IBS have depressive manifestations as a direct result of their underlying chronic disease, hence demonstrating a firm connection between depression and IBS (Staudacher et al. 2023). Furthermore, psychological conditions such as anxiety and depression may predispose individuals to develop gastrointestinal problems, demonstrating a bidirectional relationship between these disorders (Staudacher et al. 2023). Research highlights the increasing prevalence of reversed disease progression, where individuals with pre-existing psychological conditions like eating disorders later develop IBS. A clinical study from 2024 confirmed that individuals with eating disorders are predisposed to IBS, further reinforcing the connections between psychological health and gastrointestinal conditions (W. Wang et al. 2024).

Patients with IBS are more likely than the general population to experience psychological and psychiatric problems, which include anxiety disorders, eating disorders, bipolar disorder and depression leading to suicide attempts. This is due to a reduced quality of life, which often puts patients in situations with no way out, falling into addictions and poor dietary choices, further contributing to the worsening of both IBS symptoms and the realm of well-being (Tarar, Farooq, Zafar, et al. 2023; Subramanian et al. 2024). Thus, despite the clear predisposition to psychiatric disorders and the link between the disorders and the underlying disease, the scientific community still needs to look into this issue in order to study the topic in detail and draw conclusions (Y.-P. Wang et al. 2023). to be able to create a concrete therapeutic plan to seek out high-risk patients and counteract the effects (Xiong et al. 2022).

Beyond psychological factors, IBS patients face an increased risk of somatic comorbidities directly attributable to IBS. Included are Chronic Fatigue Syndrome (CFS) and Fibromyalgia, especially in the female gender, the chances increasing with age (Tarar, Farooq, Nawaz, et al. 2023; Valencia et al. 2022). Furthermore, Celiac Disease (CD) and Inflammatory Bowel Disease (IBD) are topics of interest in many works, showing quite a significant connection. Indeed, patients with Cd are inherently at higher risk of developing IBS, which is why a personalized approach is all the more called for (Mårild et al. 2024).

Several factors contribute to the manifestation and severity of IBS. Disordered eating behaviours, such as emotional or stress-induced eating, overeating or meal skipping (Jia et al. 2022; Anand and Khatib 2024), are prevalent among IBS patients. Studies have shown that individuals with such unhealthy eating habits are at higher risk of developing IBS compared to

those who maintain a balanced diet. This correlation may be linked to the psychological profiles of these patients, who often struggle to distinguish hunger and negative emotions such as stress, anger or anxiety. Consequently, they tend to consume large amounts of unhealthy and processed foods, which exacerbate gut sensitivity.

Genetic predisposition also plays a significant role in IBS development. A significant proportion of patients report a family history of gastrointestinal problems (Black and Ford 2020). This phenomenon may be partially explained by shared environmental factors in familial settings, including similar dietary behaviours and lifestyles (Black and Ford 2020; Hung, Wang, and Lee 2023). Moreover, the gut microbiome has emerged as a critical element in IBS pathogenesis. Research indicates that individuals with IBS experience distinct microbiota compositions and are more likely to develop post-infectious IBS (PI-IBS), which often develops following gastrointestinal infections (Black and Ford 2020; Berumen, Edwinson, and Grover 2021; K. Wang et al. 2022). Patients with PI-IBS are more likely to experience loose stools and diarrhea than constipation (Black and Ford 2020; Y.-N. Wang et al. 2024; Berumen, Edwinson, and Grover 2021). Symptoms may persist for years after the infection, with common causative pathogens including *Campylobacter jejuni, Escherichia coli, Salmonella enterica* and *Clostridium difficile.* Viral infections, such as those caused by noroviruses, and parasitic infections, such as Giardia lamblia, have been also implicated (Black and Ford 2020).

IBS frequently overlaps with other gastrointestinal disorders, such as epigastric pain syndrome, postprandial distress syndrome and dyspepsia, complicating diagnosis and management (Zeeshan et al. 2022). Additional risk factors for IBS include somatization and coeliac disease. These conditions highlight the importance of thorough patient evaluations and accurate subtype identification, as they significantly influence treatment strategies (K. Wang et al. 2022).

In conclusion, IBS is a multifactorial disorder influenced by genetic, environmental, psychological and dietary factors. Its complex interplay with psychological disorders, somatic comorbidities and other gastrointestinal conditions underscores the importance of comprehensive diagnostic approaches. Tailored treatment plans that address the diverse and interrelated factors contributing to IBS are essential for improving patient outcomes and quality of life.

PSYCHOLOGICAL INTERVENTION

It has been shown that psychological therapy effectively help with symptoms of irritable bowel syndrome (IBS) and is the best method for long-term management for this condition (Staudacher et al. 2023; Aziz et al. 2021). Mental health disorders are a leading cause of disability, suicide and together with IBS significantly increases the risk of depression and anxiety compared to healthy individuals (Staudacher et al. 2023; Aziz et al. 2021). Additionally, IBS is associated with lower sleep quality, nighttime awakenings and impaired motor skills (Grover et al. 2021; Fadgyas Stanculete et al. 2023; Vasant et al. 2021)**.** Another complication is that an IBS-specific diet incurs higher nutritional costs compared to other dietary regimens (Staudacher et al. 2023).

Work-related difficulties

People with IBS frequently report work-related difficulties, including reduced productivity and the inability to work as many hours as their healthy colleagues. These challenges are connected to the symptoms of IBS, which often necessitate time off work. Moreover, they contribute to the development of depression due to the disease's impact on daily life and functioning (Staudacher et al. 2023; Lacy et al. 2021).

Inability to travel

Another psychological aspect of IBS is the frequent inability to travel for long periods of time and consume a wide range of products, leading to potential social isolation and difficulty in maintaining interpersonal relationships (Staudacher et al. 2023). Notably, reduced quality of life among IBS patients has been mainly caused by a psychological distress rather than by gastrointestinal symptoms, underscoring the importance of addressing both psychological and physical aspects of the condition (Staudacher et al. 2023; Lacy et al. 2021; Vasant et al. 2021).

Autonomic nervous system

The gut-brain axis, a bidirectional communication pathway mediated by the autonomic nervous system (ANS), is connected with the increased prevalence of mental health disorders among IBS patients. Dysregulation of this axis may reduce stress recovery mechanisms,

exacerbating gastrointestinal symptoms (Staudacher et al. 2023; Aziz et al. 2021; Fadgyas Stanculete et al. 2023; Lacy et al. 2021). Furthermore, a connection between gut microbiota and depression has been identified showing that probiotic supplementation can positively influence mood and alleviate IBS symptoms (Staudacher et al. 2023; Aziz et al. 2021; Masuy, Pannemans, and Tack 2020). However, further research is necessary to directly establish the correlation between the nervous system and gastrointestinal system. Additionally, evidence suggests that IBS patients are at greater risk for neurodegenerative disorders such as Parkinson's disease and dementia (Aziz et al. 2021).

Long-term benefits

Recognizing psychological symptoms early during clinical evaluation is critical for the effective adjustment of medications and psychological interventions (Staudacher et al. 2023; Hetterich and Stengel 2020; Vasant et al. 2021). This process can be challenging due to the major focus on digestive complaints and patients' difficulties with discussing mental health issues. Nevertheless, a comprehensive approach integrating gastroenterological and psychological assessments is essential, particularly for patients unresponsive to pharmacological treatments (Hetterich and Stengel 2020). Early implementation of these strategies improves long-term disease treatment and enhances patients' quality of life (Staudacher et al. 2023; Masuy, Pannemans, and Tack 2020). Importantly, untreated psychological disorders can diminish the efficacy of IBS treatment.

Dietary interventions for IBS patients should be informed by psychological evaluations. For individuals with comorbid conditions such as depression or anxiety, adherence to dietary restrictions may prove more challenging (Staudacher et al. 2023). Patients with eating disorders should prioritize achieving nutritional balance before transitioning to a symptom-focused diet. These patients often exclude essential nutrients for extended periods of time, leading to an unhealthy relationship with food. Guiding such patients toward a sustainable and safe dietary regimen requires significant effort and underscores the importance of early psychological support in IBS management (Staudacher et al. 2023).

Each clinician can empower IBS patients by recommending self-management skills through psychoeducation. Resources such as articles, books, conversations, websites and applications that provide disease-specific knowledge can help patients navigate their condition

effectively while avoiding unnecessary dietary and behavioral restrictions (Staudacher et al. 2023; Hetterich and Stengel 2020). Complementary therapeutic approaches, including psychodynamic psychotherapy, hypnotherapy, mindfulness-based therapy, relaxation techniques and yoga, have also been shown to improve both IBS symptoms and mental well-being (Hetterich and Stengel 2020; Lacy et al. 2021; Masuy, Pannemans, and Tack 2020; Vasant et al. 2021; D'Silva et al. 2023).

DIET

Diet plays a dual role in irritable bowel syndrome (IBS), serving both as a potential trigger for symptoms and a therapeutic approach. A well-structured diet may prevent many symptoms and improve patients' quality of life. Evidence suggests that individuals with IBS frequently exclude certain products from their diet, such as milk, caffeine, fats or alcohol to reduce symptoms such as abdominal pain, bloating, gas or altered bowel habits (Staudacher and Whelan 2017; Galica, Galica, and Dumitrașcu 2022; El-Salhy, Hatlebakk, and Hausken 2019; Altomare et al. 2021). Despite these observations, the exact mechanisms through which these foods exacerbate symptoms in the gastrointestinal tract remain unclear. In addition, spicy foods containing capsaicin are often avoided due to their tendency to accelerate intestinal transit and worsen the symptoms. However, chronic consumption of chilli has been shown to reduce abdominal pain and bloating, particularly in populations with high chili consumption, such as in Asia, where daily intake exceeds that of Europeans by 10-300 times (El-Salhy, Hatlebakk, and Hausken 2019).

Gluten-free diet

A gluten-free diet is another common intervention. However, while it may improve motor function and reduce irritation in some patients, it has not demonstrated significant overall benefits for IBS individuals (Staudacher and Whelan 2017; Dimidi and Whelan 2020). Notably, those with IBS-D (diarrhea-predominant IBS) have reported symptomatic improvement, although it remains uncertain whether this is attributable to gluten intolerance or specific grain components (Altomare et al. 2021).

Lactose-free diet

Similarly, lactose-free diets are frequently employed, particularly among IBS-D patients, yet studies have failed to establish a definitive correlation between lactose consumption and symptom severity. While some patients report symptom exacerbation following lactose intake, research indicates that a low-lactose diet does not consistently reduce symptom intensity across the broader IBS population (Galica, Galica, and Dumitrașcu 2022; Altomare et al. 2021).

Probiotics

Probiotics are an emerging area of interest, offering promising but inconclusive benefits (Francavilla et al. 2019). These supplements may improve stool frequency and consistency in IBS-C)constipation-predominant IBS) and IBS-D patients, though their effects on abdominal pain, bloating require further investigation (Galica, Galica, and Dumitrașcu 2022; Dimidi and Whelan 2020). Studies reveal that IBS patients typically exhibit a different gut microbiota profile characterized by reduced populations of Lactobacillus sp. and Bifidobacterium sp. (Altomare et al. 2021; Dimidi and Whelan 2020; Pedersen et al. 2017). Supplements rich with these bacteria may help restore microbial balance and alleviate symptoms, though personalized approaches are necessary due to individual variability in gut microbiota (Galica, Galica, and Dumitrașcu 2022). Conversely, prebiotics have shown limited efficiency in addressing pain, bloating and gas, highlighting the need for further research (Dimidi and Whelan 2020).

Dietary fiber is another critical factor, exerting variable effects on IBS patients depending on its type, daily intake nad the IBS subtype. Insoluble fiber, found in corn and grains, often exacerbates symptoms, whereas soluble, viscous and low-fermentable fibers, such as psyllium and isphagula, have demonstrated efficacy in alleviating symptoms in IBS-C nad IBS-D (Dimidi and Whelan 2020). These fibers are not only recommended for IBS patients but are also beneficial for overall health and well-being (Galica, Galica, and Dumitrașcu 2022). Bulking polymers, which draw water into the intestines, are particularly effective for IBS-C patients, improving stool consistency.

Low FODMAP diet

The low FODMAP diet, a relatively recent innovation, focuses on limiting short-chain fermentable carbohydrates, including fructose, lactose, fructans, galactans and polyols, found in foods like legumes, onions, wheat and honey (Altomare et al. 2021; Bertin et al. 2024; Varjú et al. 2017). These compounds, poorly absorbed in small intestine, increase water content and cause gas production during fermentation in the colon, leading to abdominal discomfort, bloating and pain (Varjú et al. 2017).

The low FODMAP diet consists of three stages: elimination of highFODMAP products, gradual reintroduction of individual food groups and a personalized diet (Galica, Galica, and Dumitrașcu 2022; Dimidi and Whelan 2020). Slow and individual introduction of specific carbohydrates and regular check-ups of the effect on the body enables patients to manage symptoms without an overly restrictive diet.

Research shows that 50-80% of the examined IBS patients experience improvement with the low FODMAP diet in short-term outcomes, though long-term depend on symptom severity at the beginning, adherence and the extent of carbohydrate reintroduction (Staudacher and Whelan 2017; Black, Staudacher, and Ford 2022; Galica, Galica, and Dumitrașcu 2022; Masuy, Pannemans, and Tack 2020; Altomare et al. 2021; Bertin et al. 2024). Additionally, the restrictiveness, maintaining a given diet and introduction to it should be taken into account. Professional guidance is necessary for its successful implementation, as improper use may result in nutritional deficiencies or imbalance (Galica, Galica, and Dumitrașcu 2022; Bellini et al. 2020; Altomare et al. 2021; Dimidi and Whelan 2020; Staudacher et al. 2020). Caution is advised when following a low FODMAP diet for extended periods of time. Prolonged restriction of certain products might deplete essential nutrients and antioxidants potentially disrupting git microbiota (Masuy, Pannemans, and Tack 2020; Bertin et al. 2024; Dimidi and Whelan 2020) or prebiotics, which play a protective role in the digestive tract and help with fermentation and metabolic activity. Further research is required to explore the microbiota's response to dietary exclusions and to optimize testing methods (Bellini et al. 2020).

NICE-modified diet

The NICE (National Institute for Health and Care Excellence)-modified diet which focuses on small and regular meals while avoiding products such as alcohol, caffeine and high-

fat foods, which are potentially triggering for people with IBS. (El-Salhy, Hatlebakk, and Hausken 2019). Although it is less effective than the low FODMAP diet, the NICE-modified diet offers decent symptom relief and is easier to follow for patients (Galica, Galica, and Dumitrașcu 2022; Altomare et al. 2021; Bertin et al. 2024). Recommendations include substituting rye products with spelt and psyllium as a source of fiber, while limiting beans, cabbage, carbonated beverages and artificial sweeteners (Altomare et al. 2021).

TREATMENT

The approach to IBS is changing every year, becoming more personalized with the patient's well-being and comfort in mind, with the primary goal of suppressing flare-ups and thus improving quality of life. Referring therefore to the above, the approach should be interdisciplinary, calling for the cooperation of gastroenterologists, psychologists, psychiatrists, urologists, gynecologists and nutritionists, etc. to be able to take a full look at the patient, reducing the effects of the disease. Treatment, therefore, combines both the management of both somatic and psychological symptoms, which is often combined with undue stress and deterioration of quality of life. Multidisciplinary care should be included as early as the stage of diagnosis in order to move smoothly to the level of treatment. Great emphasis is placed on psychotherapy and psychological treatment as the basis for the long-term management of a patient with IBS, especially given that the etiology of the condition touches on both failure to cope with stress and individual factors.

Referring to the above, the treatment of IBS should be described in multilevel terms referring to pharmacological and psychological management (Nelkowska 2020; Pak et al. 2024).

Pharmacological treatment of IBS, especially in the form with increased constipation include fiber, Polyethylene glycol (PEG), Linaclotide and Plecanatide, Tegaserod and Tenapanor. In opposition, science on IBS-D therapy leans towards the use of medication such as Loperamide, Rifaximin, Eluxadoline and Alosetron. As for the treatment of the so-called general symptoms of IBS comes down to Antispasmodics, Selective Serotonin Reuptake Inhibitors (SSRIs) and Tricyclic Antidepressants (TCAs). The topics of probiotics and possible Fecal Microbiota Transplant (FMT) are also proving to be interesting therapeutic approaches. Essentially although, an indispensable part of any IBS treatment, should be dietary modification and psychotherapy (Tetali and Suresh 2024).

Fiber

Polyphenols, minerals, fibers have shown effectiveness in managing IBS symptoms, thus leading to a better quality of life through symptom reduction by achieving improved bowel movements. Minerals, especially such as magnesium, zinc, and selenium also improve overall well-being. Ultimately, all previously mentioned, has positive effect on bowel movements, reducing the potential chances of suffering from constipation (Chiarioni et al. 2023).

Polyethylene glycol (PEG)

Polyethylene glycol (PEG) commonly used as a intervention for constipation, is used as a first-line remedy for IBS-C, thereby increasing osmotic secretion, bringing relief to patients. There have been debates over their recommendation for years, but given the considerable body of research indicates their effectiveness, further pointing to their easy availability (Cheng et al. 2024).

Linaclotide and plecanatide

Linaclotide and plecanatide, both approved by FDA in 2012 and 2017 being GC-C agonists, which are still being debated over, mainly due to side effects, which primarily include diarrhea, that may outweigh their discontinuation. However, despite this, some patients benefit from their use, making them a safe and effective agent, according to the FDA (Tetali and Suresh 2024; Lembo 2023).

Tegaserod

Tegaserod was the first US Food and Drug Administration-approved drug registered several decades ago, specifically dedicated to women under 65 years of age without cardiovascular disease, mainly suffering from IBS-C. The results clearly indicate its validity and effectiveness in reducing manifestations. The impacts of the medication appear quite quickly, even within the first week of administration. In addition, according to clinical studies,

Tegaserod reduces other symptoms of IBS, which include abdominal pain and bloating in women with IBS-C (Shah et al. 2021).

Tenapanor

Tenapanor, through its actions focusing on increasing gastrointestinal motility, reducing inflammation and permeability, helps stabilize IBS, in particular in patients with IBS-C (Singh et al. 2024). Consequently, the drug is impactful in improving peristalsis and thus providing relief from abdominal pain symptoms, reducing patients' discomfort (Herekar et al. 2023).

ABDOMINAL PAIN - Antispasmodics, Antidepressant (amitriptyline i TCAs)

Antispasmodics

These pharmaceuticals, acting by relaxing the muscles, alleviate abdominal pain and as a result increase patients' consolation. However, according to recent reports, including the PERSUADE study, their use does not show significant influence supposed to mitigate pain to IBS patients. The study clearly concludes that there was no change in bowel frequency or stool character in patients using Antispasmodics (Marasco et al. 2024). The ACG is against recommending their implement in the context of IBS. This fact has to do with potential side effects from the anticholinergic system. The AGA, in contrast, argues that the use of the medication should only occur when other treatments have disappointed to soothe, pointing to cautious use and safety checks. Hence, in summary, these therapeutics belong to the low certainty drug group (Tetali and Suresh 2024).

Tricyclic antidepressants (TCA)

These medications recommended, both by the AGA and the ACG, have shown unquestionable success in providing relief and reducing IBS-related symptoms. Discontinuation of treatment has been mainly associated with adverse effects from the anticholinergic system. Most of the patients complained to a greater extent of dry mouth, impaired vision and urinary problems ("Low-Dose Tricyclic Antidepressants for Irritable Bowel Syndrome: Definitive Evidence of Benefit from ATLANTIS," n.d.).

Selective serotonin reuptake inhibitors (SSRI)

According to one of the larger trials, ATLANTIS, clearly demonstrates the efficacy of Amitriptyline used as a second-tier treatment, while confirming its safety and good tolerability by IBS patients. Therefore, they recommend that general practitioners begin intervention when a patient's IBS symptoms are unmanageable with first-line medications, with a personalized approach properly maintained (Ford et al. 2023; Wright-Hughes et al. 2024)

5-HT3 antagonists

These agents belong to a group of medications on which research is still being conducted as to their effectiveness, thus not ruling out benefits. So far, the randomized clinical trials performed are positive regarding the treatment of IBS. Alosetron is currently recommended by the ACG and AGA especially in patients with severe IBS-D in whom previous lines of treatment have failed. However, debates still rage over Ondansetron, which is currently not recommended by both the ACG and the AGA (Tetali and Suresh 2024; Jafari et al. 2024; Camilleri and Boeckxstaens 2023).

DIARRHEA - Loperamide, Bile Acid Sequestrants

Loperamide

Loperamide is particularly used in cases with IBS in the form of chronic diarrhea (Castro Tejera et al. 2022). Despite its absence from the recommendations of the ACG, is still recommended by the AGA mainly due to the lack of concrete evidence of its ineffectiveness, notably considering that it has a proven anti-diarrheal effect (Tetali and Suresh 2024).

Bile Acid Sequestrants

A group of drugs particularly used in patients with IBS-D. Agents such as Cholestyramine, Colestipol and Colesevelam are considered constructive when other lines of therapy have been unsuccessful. Among the unfavorable facts used above group of drugs is the fact that they cause constipation and interfere with the absorption of other drugs, which

ultimately can disturb the picture of treatment, as well as well-being and somatic symptoms in the patient ("Recent Advances in the Treatment of Irritable Bowel Syndrome," n.d.).

GLOBAL IBS SYMPTOMS

Rifaximin

Rifaximin, approved by the FDA as an oral minimally absorbed antibiotic, is used with significant efficacy in patients with IBS. Patients show both an improvement in stool character and bowel frequency, thus being a medication that benefits the treatment of IBS (Marasco et al. 2024). In addition, Rifaximin is considered a crucial factor that reduces bloating, which contributes to patient comfort. The opinions of experts and the results of studies remain undisputed.

Eluxodine

The FDA-approved medicine for the treatment of IBS in adults is used in patients, bringing benefits from the reduction of overall symptoms. Impact and its safety have been confirmed in numerous clinical trials giving physicians a clear view (Vijayvargiya et al. 2022). Strongly recommended by both the ACG and AGA to a group of patients who can gain potential benefits from its use. Discontinuation of the drug is usually associated with side effects, which include constipation and nausea. Keep in mind, however, that the drug is not intended for patients at risk for pancreatic cancer, including patients with a history of alcoholism and pancreatitis (Tetali and Suresh 2024).

Probiotics

Probiotics, although they have appeared to be a contentious topic in relation to the treatment of IBS for many years, a significant body of research indicates that some patients benefit extensively from their implementation, either as an indispensable part of treatment or as an adjunct. There is a wide variety of products on the pharmaceutical market today, ranging from the number of strains contained in a dose to the species, so it is important to recognize to use them with caution and always align with the patients' needs. That said, to summarize the

issue of probiotics, scientists are still in the process of establishing a specific relationship between probiotics and long-range effects in the treatment of IBS patients (Lopes et al. 2024).

OTHER THERAPIES - Gut-directed Psychological Therapies, Mesalazine,

Mesalazine

Recent clinical studies claim it is modestly efficacious, reducing patients' overall complaints, predominantly in those with IBS-D (Goodoory et al. 2024) Other studies, on the other hand, attest to the lack of any efficacy of the medicine in the treatment of IBS (Castro Tejera et al. 2022). Thus, Mesalazine still remains a topic in the pharmaceutical world that needs further research in the context of its efficacy in IBS patients.

Faecal Microbiota Treatment (FMT)

FMT is one of the proposed therapies for a particular group of IBS patients. Studies have shown that this method has the potential to be potent, significantly if performed in the endoscopic procedure, nasojejunal tube or rectal enema (Dai, Huang, and Jiang 2024). It is certainly an extremely promising method, involving a slightly different view of IBS therapy, which requires further research, so the strength, safety and specific indications of both recipient and donor cannot be clearly determined yet (Tang et al. 2024). Further reports attest to the effectiveness of FMT especially in the context of improving the gut microbiota, and hence improving metabolic aspects (Sahi et al. 2024).

CONCLUSIONS

Summarizing the current understanding of the treatment and management of Irritable Bowel Syndrome, the cornerstone of effective care lies in adopting a comprehensive, multidisciplinary approach. Such a strategy is essential for addressing both somatic symptoms and the overall well-being of the patient. Optimal IBS management involves the integration of pharmacological and non-pharmacological interventions, working in tandem to improve patient outcomes and significantly reduce the frequency of future hospitalizations.

IBS is a multifaceted disorder that not only impacts gastrointestinal health but also increases the risk of both somatic and psychological comorbidities. Patients with IBS are particularly vulnerable to mental health conditions such as depression, anxiety and bipolar disorders, which, in severe cases, may lead to suicide attempts. Consequently, psychological support is a vital component of care. Additionally, scientific evidence highlights a heightened prevalence of conditions such as Fibromyalgia, Inflammatory Bowel Disease (IBD), and Celiac Disease among IBS patients. This underscores the need for continuous monitoring and collaboration across multiple medical specialties to provide holistic and effective care. This is a disorder whose mechanisms remain the subject of ongoing research, and which necessitates many more years of observation to achieve a comprehensive understanding.

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All authors have read and agreed with the published version of the manuscript.

Disclosure:

No disclosures.

Funding statement:

This research did not receive special funding.

Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable

Data availability statement

Not applicable.

Conflict of Interests Statement

The authors declare no conflict of interest.

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