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DIRECT AND INDIRECT FACTORS CONTRIBUTING TO IRRITABLE BOWEL SYNDROME

العامل المباشر وغير المباشر التي تسهم في متلازمة القولون العصبي

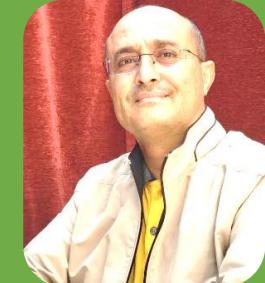
Abstract: Irritable Bowel Syndrome (IBS) is a complex gastrointestinal disorder influenced by direct factors such as gut-brain interaction and microbiota dysbiosis, as well as indirect factors like psychological stress and childhood trauma. Recognizing these multifaceted contributors is crucial for effective diagnosis and treatment.

Keywords: Irritable Bowel Syndrome, gut-brain interaction, microbiota dysbiosis, psychological stress, treatment.

الخلاصة: متلازمة القولون العصبي (IBS) اضطرابٌ معدٍّ معويٍّ مُعَقِّدٍ يتأثر بعوامل مباشرة، مثل تفاعلات الأمعاء والدماغ، بالإضافة إلى عوامل غير مباشرة، مثل الضغط النفسي وصدمات الطفولة. يُعَدُّ إدراك هذه العوامل المتعددة أمرًا بالغ الأهمية للتشخيص والعلاج الفعالين.

الكلمات المفتاحية: متلازمة القولون العصبي، تفاعلات الأمعاء والدماغ، اختلال توازن ميكروبات الأمعاء، الضغط النفسي، العلاج.

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Introduction

Irritable Bowel Syndrome (IBS) is a prevalent gastrointestinal disorder characterized by symptoms such as abdominal pain, bloating, and altered bowel habits. Its complex etiology involves a combination of direct factors, including gut-brain interactions, visceral hypersensitivity, and microbiota dysbiosis, alongside indirect influences like psychological stress and childhood trauma. The interplay between these factors complicates the diagnosis and management of IBS, making it essential to understand their roles in symptom development. This overview explores the multifaceted contributors to IBS, emphasizing the need for a holistic approach to treatment and care. Understanding these factors can lead to more effective interventions and improved quality of life for affected individuals.

Results and discussion

Irritable Bowel Syndrome (IBS) is a complex disorder characterized by a range of gastrointestinal symptoms, including abdominal pain, bloating, and altered bowel habits. The etiology of IBS is multifactorial, involving both direct and indirect factors that contribute to its development and symptomatology.

Direct Factors

1. **Gut-Brain Interaction:** IBS is primarily recognized as a disorder of gut-brain interaction, where alterations in the communication between the gastrointestinal (GI) tract and the brain lead to symptoms. This interaction is influenced by various physiological and psychological factors [1].

2. **Visceral Hypersensitivity:** Patients with IBS often exhibit increased sensitivity to visceral stimuli, which can result in exaggerated pain responses to normal intestinal distension [3]. This hypersensitivity is a key feature of the disorder and contributes to the perception of pain and discomfort.

3. **Gastrointestinal Motility:** Abnormalities in GI motility are frequently observed in IBS patients. These may include rapid transit in diarrhea-predominant IBS (IBS-D) and delayed transit in constipation-predominant IBS (IBS-C) [1]. Such motility changes can lead to the characteristic symptoms of IBS.

4. **Microbiota Dysbiosis:** Alterations in gut microbiota composition, known as dysbiosis, have been implicated in the pathogenesis of IBS. An imbalance in gut bacteria can affect gut function and contribute to symptoms such as bloating and gas [3].

5. **Food Sensitivities:** Certain food intolerances, particularly to fermentable oligosaccharides, disaccharides, monosaccharides, and polyols (FODMAPs), can trigger IBS symptoms. Dietary management, including a low FODMAP diet, has shown efficacy in symptom relief [1].

Indirect Factors

1. **Psychological Stress:** Psychological factors, including stress, anxiety, and depression, are significant contributors to IBS. Many patients report that stress exacerbates their symptoms, highlighting the role of the brain-gut axis in the disorder [2].

2. **Childhood Trauma:** A history of adverse childhood experiences, such as physical or emotional abuse, has been associated with an increased risk of developing IBS later in life. This suggests that early life stressors may have long-lasting effects on gut health [2].

3. **Post-Infectious IBS:** Some individuals develop IBS following an episode of gastroenteritis. This post-infectious IBS is characterized by persistent symptoms that can arise after an infection, indicating a potential link between gut infections and the development of IBS [3].

4. **Genetic Predisposition:** Genetic factors may also play a role in the susceptibility to IBS. Family history of IBS or other functional gastrointestinal disorders can increase the likelihood of developing the condition [2].

5. **Socioeconomic Factors:** Socioeconomic status and access to healthcare can indirectly influence the management and outcomes of IBS. Individuals from lower socioeconomic backgrounds may experience barriers to effective treatment, exacerbating their symptoms [1].

Conclusion

The multifactorial nature of IBS underscores the importance of a comprehensive approach to diagnosis and management. Understanding both direct and indirect factors contributing to IBS can aid in developing targeted therapies and improving patient outcomes.

Literature

- Ionescu, V.A.; Gheorghe, G.; Georgescu, T.F.; Bacalbasa, N.; Gheorghe, F.; Diaconu, C.C. The Latest Data Concerning the Etiology and Pathogenesis of Irritable Bowel Syndrome. *J. Clin. Med.* 2024, 13, 5124. <https://doi.org/10.3390/jcm13175124>
- Ali, M. G. H. Advancing technologically in Yemen's medical field (mini review) / M. G. H. Ali ; scientific supervisor M. F. S. H. AL-Kamali // I Международный молодёжный научно-культурный форум студентов, магистрантов, аспирантов и молодых учёных [Электронный ресурс] : сборник материалов, Гомель, 5-7 марта 2024 г. / М-во образования Респ. Беларусь ; Гомельский государственный технический университет имени П. О. Сухого ; Тайзский университет ; Научная организация исследований и инноваций ; под общ. ред. А. А. Бойко. – Гомель : ГГТУ им. П. О. Сухого, 2024. – С. 42.
- Vasant, D.H.; Paine, P.A.; Black, C.J.; Houghton, L.A.; Everitt, H.A.; Corsetti, M.; Agrawal, A.; Aziz, I.; Farmer, A.D.; Eugenicos, M.P.; et al. British Society of Gastroenterology guidelines on the management of irritable bowel syndrome. *Gut* 2021, 70, 1214–1240.