

Chapter 30

Does Stress Play a Role in My Disease? The Role of Stress and Psychiatric Issues in IBD

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Suggested Response to the Patient

Stress, defined as any circumstance that overwhelms a person's ability to deal with it effectively, can have a negative effect on the course of inflammatory bowel disease (IBD). Stressors can be biological (e.g., infection, surgery) or environmental (e.g., life stress or trauma). If stress is extreme or chronic, it can lead to psychological reactions such as anxiety and depression as well as physical consequences such as poor sleep, worse gastrointestinal symptoms, and immune system problems. In patients with IBD, these effects have been linked to poor response to medical treatment and relapse of IBD activity. The strong bidirectional communication between the brain and gut is thought to underlie these types of stress reactions and also provide the substrate for why brain-based interventions can help reduce stress and have positive effects on the gastrointestinal tract and quality of life in patients with IBD.

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Brief Review of the Literature

There is growing evidence supporting the neurobiological manifestations of IBD including anxiety, depression, persistent abdominal pain, fatigue, and poor sleep [2]. These symptoms can occur both during periods of increased IBD-related inflammation but have also been reported during periods of relative remission of IBD. Since IBD is a lifelong disorder, the effects of stress can be cumulatively detrimental and thus important to identify and manage as early as possible in the disease process [1, 6].

Stress and IBD

The stress response and the resulting activation of a cascade of hormonal and neurochemical reactions are essential to enhance the survival of organisms in the short term. However, when stress is extreme or becomes chronic, it can lead to compromised functioning. In the face of a lifelong biological stressor like IBD, chronic stress exposure is associated with worse disease course, more chronic pain, and reduced quality of life [3]. Both experienced and perceived stress has been shown across multiple studies to contribute to the risk of relapse in IBD. Psychological stress responses can occur across a spectrum of severity from situational symptoms of emotional distress to functionally impairing psychiatric syndromes. Patients with IBD may have other factors predisposing to an exaggerated stress response unrelated to their disease such as other comorbid medical diagnoses, history of trauma, social conflict, and those with genetic vulnerability to psychiatric disorders (e.g., positive family history) [2]. Collectively, the presence and severity of these factors determine what type of stress management may help patients the most.

Psychiatric Issues and IBD

Depression has been reported in as many as 40 % of patients with IBD and up to four times higher than the rates reported

in comparison samples [8]. The highest depressive rates have been reported in patients with active disease or those with a more chronic or complicated disease course (e.g., having surgical complications or comorbid functional abdominal pain) [4, 5]. Similarly, clinically significant anxiety symptoms have been reported in patients with IBD with rates as high as 80 % during IBD relapse [8]. It is still unclear from the existing literature whether anxiety or depression precedes the diagnosis of IBD or whether there are differences in rates and underlying causal factors between patients with Crohn's disease or ulcerative colitis, the two predominant types of IBD. Regardless of the etiology, psychiatric symptoms are treatable and targeted psychosocial interventions and psychotropic medications can improve the quality of life in patients with IBD.

Neurobiology of the Stress-Brain-Gut Connection in IBD

The brain-gut interactions related to stress involve the autonomic nervous system, the central nervous system, and the hypothalamic-pituitary-adrenal (HPA) axis, as well as the enteric nervous system, microbiome, and immune response in the gastrointestinal tract [1]. There is preliminary evidence that psychosocial interventions can reduce acute inflammation in adolescents and adults with IBD and may influence these other neurobiological pathways as well [9, 10]. Future studies are needed to show that stress management alters longer-term course of IBD or could provide a protective effect against epigenetic factors underlying the pathophysiology of IBD.

References

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