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Short communication

Nutrition in inflammatory bowel diseases

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Introduction

Inflammatory bowel disease (IBD), comprising Crohn's disease (CD) and ulcerative colitis (UC), represents a group of chronic immune-mediated disorders characterized by relapsing intestinal inflammation. The pathogenesis of IBD involves a complex interaction between genetic predisposition, environmental factors, the intestinal microbiome, and dysregulated immune responses. Nutritional status is increasingly recognized as a critical determinant of disease progression, therapeutic response, and quality of life in affected patients. Malnutrition is one of the most common complications of IBD and may occur at any stage of the disease. Its prevalence is particularly high in patients with Crohn's disease, although individuals with ulcerative colitis are also at significant risk during periods of active inflammation. Malnutrition results from reduced dietary intake, malabsorption, increased nutrient losses, elevated metabolic demands, and medication-related effects. Consequently, nutritional assessment and intervention have become essential components of comprehensive IBD management (Forbes et al., 2017; Dolinger et al., 2024).

Material and methods

Current evidence and clinical recommendations regarding nutritional management in IBD were critically reviewed using a narrative approach. Data was obtained from international guidelines and key studies focusing on malnutrition, enteral nutrition, exclusion diets, and nutritional support strategies in patients with Crohn's disease and ulcerative colitis.

Results and discussion

The severity of malnutrition in IBD is influenced by disease activity, duration, anatomical extent, and the magnitude of the inflammatory response (Forbes et al., 2017, Massironi et al., 2013). Nutritional management plays an important role in both the prevention and treatment of malnutrition. Current evidence supports routine nutritional screening of all patients with IBD, particularly during active disease, hospitalization, perioperative periods, and in the presence of strictures, fistulas, or intestinal insufficiency (Forbes et al., 2017).

Exclusive enteral nutrition (EEN) represents the most established nutritional intervention in Crohn's disease. EEN provides 100% of a patient's

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nutritional requirements through a nutritionally complete liquid formula administered orally or via feeding tube. Multiple studies have demonstrated that EEN can induce clinical remission, promote mucosal healing, reduce inflammatory activity, and improve nutritional status (Levine et al., 2019; Ashton et al., 2019; Wall et al., 2018). These benefits are particularly evident in pediatric patients, where EEN is considered a first-line therapeutic option for induction of remission (Mitchell and Rosh, 2022, Ashton et al., 2019). In adults, EEN remains an effective alternative treatment, although long-term adherence may be limited by tolerability and patient compliance (Ashton et al., 2019, Wall et al., 2018).

Recent advances have highlighted the role of diet in modulating intestinal microbiota and inflammatory responses. Dietary approaches such as the Crohn's Disease Exclusion Diet (CDED), Specific Carbohydrate Diet (SCD), low-FODMAP diet, and Mediterranean diet have demonstrated promising results in symptom control and maintenance of remission (Levine et al., 2019; Dolinger et al., 2024). Current recommendations emphasize reducing highly processed foods and encouraging consumption of minimally processed whole foods tailored to individual patient needs (Forbes et al., 2017).

Patients with IBD should receive practical dietary counseling aimed at maintaining adequate nutritional intake while minimizing gastrointestinal symptoms (Forbes et al., 2017). Parenteral nutrition remains an indispensable therapeutic option for patients with acute or chronic intestinal failure, severe malnutrition, short bowel syndrome, or when enteral nutrition is contraindicated. Furthermore, nutritional optimization before surgery has been associated with improved postoperative outcomes and reduced complications (Forbes et al., 2017).

Conclusion

Nutrition is a fundamental component of modern IBD management. Early identification and treatment of malnutrition, implementation of evidence-based nutritional interventions, and individualized dietary counseling contribute significantly to improved clinical outcomes and quality of life. Exclusive enteral nutrition remains the most evidence-supported nutritional intervention in Crohn's disease, while emerging dietary strategies targeting the intestinal microbiome offer promising opportunities for personalized treatment.

The increasing recognition of nutrition as a therapeutic tool underscores the importance of multidisciplinary management involving gastroenterologists, dietitians, pharmacists, and specialized nursing staff. Such collaboration facilitates the implementation of individualized nutritional care as an integral part of a comprehensive approach aimed at optimizing clinical outcomes.

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