

Comprehensive Clinical Management of Constipation and Integrated Strategies

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Abstract: Constipation is a common gastrointestinal disorder with significant impact on quality of life and healthcare systems worldwide. This paper examines current clinical management strategies for constipation, focusing on integrated approaches that combine lifestyle interventions, pharmacological treatments, and emerging therapies. Through analysis of recent guidelines and research evidence, we demonstrate the importance of personalized treatment plans based on pathophysiology classification. The implementation of stepped treatment protocols, emphasizing initial lifestyle modifications followed by targeted laxative therapy and specialized interventions for refractory cases, shows improved patient outcomes.

Keywords: Chronic constipation, Clinical management, Stepped treatment, Integrative medicine, Non-Pharmacological therapy

1. Introduction

Constipation represents a prevalent gastrointestinal condition characterized by unsatisfactory defecation due to infrequent stools, difficulty passing stools, or sensation of incomplete emptying. According to the Rome IV diagnostic criteria, functional constipation is defined as spontaneous bowel movements occurring fewer than three times per week, along with associated symptoms such as straining, lumpy or hard stools, and sensation of anorectal obstruction. The global prevalence of constipation varies considerably, affecting approximately 8.5% of the Chinese population and 7.0%-20.3% of adults in China, with higher rates among elderly populations reaching 15%-20%. This condition demonstrates significant geographical variation, with higher prevalence rates reported in northern China compared to southern regions, and increased occurrence among women compared to men. The clinical management of constipation faces numerous challenges, including underreporting, heterogeneity in pathophysiological mechanisms, and varied treatment responses among patients. Chronic constipation typically requires long-term management strategies that extend beyond simple laxative use, incorporating dietary modifications, behavioral interventions, and specialized treatments based on specific subtypes. Current clinical guidelines emphasize the importance of thorough assessment to exclude secondary causes before implementing treatment protocols tailored to individual patient characteristics and constipation classifications. This paper aims to provide a comprehensive overview of contemporary clinical approaches to constipation management, analyzing evidence-based interventions across the therapeutic spectrum and exploring emerging directions that shape future treatment paradigms.

2. Definition, Classification, and Epidemiology of Constipation

2.1 Clinical Definition and Diagnostic Criteria

Constipation is fundamentally defined as a symptom-based disorder characterized by persistent difficulties in defecation, encompassing reduced stool frequency, altered stool consistency, or challenges in stool passage. The Rome IV criteria provide standardized diagnostic parameters for functional constipation, requiring the presence of at least two of the following symptoms for a minimum of three months: straining during more than 25% of defecations, lumpy or hard stools in more than 25% of defecations, sensation of incomplete evacuation in more than 25% of defecations, sensation of anorectal obstruction in more than 25% of defecations, manual maneuvers to facilitate defecations in more than 25% of defecations, and fewer than three spontaneous bowel movements per week. Additionally, loose stools are rarely present without the use of laxatives, and insufficient criteria for irritable bowel syndrome must be confirmed.

The pathophysiological classification system categorizes functional constipation into three distinct subtypes: slow-transit constipation (characterized by delayed colonic transit), defecatory disorder (featuring impaired rectal evacuation), and mixed pattern. Slow-transit constipation primarily involves reduced colonic propulsion and impaired coordination, while defecatory disorders encompass functional abnormalities in the pelvic floor muscles and anal sphincter complex. Accurate subtyping through appropriate diagnostic investigations enables targeted therapeutic interventions, significantly improving treatment outcomes and reducing unnecessary medication exposure^[1].

3. Contemporary Clinical Management Strategies for Constipation

3.1 Stepped Treatment Approach

Current clinical guidelines recommend a structured, stepped approach to constipation management that begins with foundational interventions and progresses to more specialized treatments based on treatment response and symptom severity. The initial phase emphasizes non-pharmacological interventions, including dietary modification, adequate fluid intake, and regular physical activity. Dietary adjustments focus primarily on increased fiber consumption, with recommendations targeting 20-30 grams of daily fiber intake through whole grains, fruits, vegetables, and supplemented with fiber products like psyllium when necessary. Multiple studies have confirmed that increased dietary fiber significantly improves stool frequency and consistency, particularly in patients with mild to moderate constipation.

When initial lifestyle modifications prove insufficient, pharmacological intervention follows a similar stepped methodology. First-line laxative therapy typically begins with bulk-forming agents, which work by increasing stool water content and volume. If inadequate response occurs, osmotic laxatives such as polyethylene glycol or lactulose are introduced, with stimulant laxatives reserved for cases unresponsive to osmotic agents. Recent treatment algorithms have incorporated secretagogues like lubiprostone and linaclotide as second-line options for patients with insufficient response to traditional laxatives. This systematic approach ensures rational medication use while minimizing potential side effects associated with inappropriate laxative selection or dosing^[2].

3.2 Non-Pharmacological Interventions

Non-pharmacological approaches constitute fundamental components of comprehensive constipation management, particularly for specific subtypes. Biofeedback therapy represents the first-line treatment for defecatory disorders, utilizing visual or tactile feedback to retrain pelvic floor muscles and improve coordination during defecation. Multiple randomized trials have demonstrated superior efficacy of biofeedback compared to laxatives alone for patients with pelvic floor dyssynergia, with sustained benefits lasting beyond active treatment periods.

Acupuncture has emerged as an evidence-supported intervention for slow-transit constipation, with specific protocols like “individualized deep needling at Tianshu (ST25)” demonstrating comparable efficacy to lactulose in randomized controlled trials. This approach involves precise needling techniques targeting bilateral Tianshu points, with penetration depth extending through the peritoneum to achieve therapeutic effects. Clinical studies have documented not only short-term benefits but also sustained effects lasting 3-6 months post-treatment, addressing the challenge of long-term medication dependence. The procedural specification includes electrical stimulation parameters (2/15Hz equal amplitude) applied for 30-minute sessions, performed five times weekly over four weeks.

Behavioral modifications encompass scheduled toilet training, optimizing defecation posture (often through squatting positions), and dedicated time for bowel movements following meals to capitalize on the gastrocolic reflex. Patients are advised to attempt defecation upon waking and within 30 minutes after meals, maintaining each effort for 5-10 minutes without excessive straining. These techniques, when consistently applied, significantly improve bowel regularity and reduce symptoms of incomplete evacuation, particularly for patients with defecatory disorders^[3].

3.3 Surgical Interventions

Surgical management remains reserved for carefully selected cases of severe, refractory constipation that demonstrate specific physiological abnormalities and fail comprehensive conservative management. The 2022 Chinese Clinical Practice Guidelines for Adult Chronic Constipation emphasize rigorous patient selection criteria, including definitive physiological characterization through extensive diagnostic testing and exclusion of psychiatric comorbidities that might compromise postoperative adherence. Surgical options include subtotal colectomy with ileorectal anastomosis for documented slow-transit constipation without defecatory disorder, and various procedures addressing specific structural abnormalities such as rectoceles or rectal intussusception in defecatory disorders.

Despite surgical advances, outcomes remain variable, with potential complications including persistent abdominal pain, diarrhea, and bowel obstruction. Recent guidelines highlight the importance of comprehensive preoperative counseling regarding realistic expectations and potential adverse effects. Postoperative management requires multidisciplinary collaboration between surgeons, gastroenterologists, and dietitians to optimize long-term results and manage potential complications. The evolving landscape of surgical intervention continues to emphasize restraint and careful patient selection, with emerging techniques focusing on minimally invasive approaches and neuromodulation strategies that may offer future alternatives for refractory cases^[4].

4. Conclusion

The clinical management of constipation has evolved significantly from simplistic laxative prescribing toward sophisticated, mul-

tidimensional approaches incorporating lifestyle modification, pharmacological interventions, procedural therapies, and surgical options carefully tailored to individual patient characteristics. The stepped treatment model provides a structured framework for implementing these strategies in a resource-efficient manner, beginning with fundamental interventions and progressing to specialized treatments based on therapeutic response. The integration of traditional medicine with conventional approaches offers complementary benefits, particularly for functional constipation, as evidenced by recent expert consensus guidelines. Non-pharmacological interventions including biofeedback and acupuncture have established roles in specific constipation subtypes, supported by growing evidence from clinical trials.

Future directions in constipation management emphasize personalized approaches based on detailed physiological characterization, emerging biological therapies targeting specific pathways, and digital health technologies enabling continuous monitoring and adherence support. Despite these advances, important challenges remain, including improving patient education, reducing unnecessary laxative use, enhancing access to specialized diagnostics, and addressing cultural variations in help-seeking behaviors. The continued development of evidence-based guidelines and multidisciplinary care models will further optimize outcomes for patients with this common yet complex condition.

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