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Diagnosis and Management of Constipation: A Narrative Literature Review

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ABSTRACT

Constipation can occur as a primary or secondary condition. This literature review aimed to describe the diagnosis and management of constipation. Primary constipation is generally classified into three categories. Normal transit (functional) constipation involves a normal rate of passage of stool, but there is difficulty with the evacuation of the stool. Functional constipation is most common and is associated with a sedentary lifestyle, a low-residue diet (consumption of very refined foods), or low fluid intake, which decreases stool volume and bulk and can lead to constipation. Lack of access to toilet facilities, consistent suppression of the urge to empty the bowels, and dehydration are other causes. Slow transit constipation involves impaired motor activity of the colon with infrequent bowel movements, straining to have a bowel movement, mild abdominal distention, and palpable stool in the sigmoid colon. Pelvic floor dysfunction (pelvic floor dyssynergia-anismus), or outlet dysfunction, is difficulty passing stool due to failure of the pelvic floor muscles or anal sphincter to relax with a bowel movement.

1. Introduction

Constipation is difficult or infrequent bowel movements and is estimated to affect 2% to 28% of the population. Constipation must be defined on an individual basis because bowel movements differ greatly between individuals. Normal bowel habits range from two or three evacuations per day to one per week. Constipation is not significant to the extent that it causes a health risk (e.g., severe abdominal distention or fecal impaction) or impairs quality of life.¹⁻⁵ This literature review aimed to describe the diagnosis and management of constipation.

Pathophysiology of constipation

Constipation can occur as a primary or secondary condition. Primary constipation is generally classified

into three categories. Normal transit (functional) constipation involves a normal rate of passage of stool, but there is difficulty with the evacuation of the stool. Functional constipation is most common and is associated with a sedentary lifestyle, a low-residue diet (consumption of very refined foods), or low fluid intake, which decreases stool volume and bulk and can lead to constipation. Lack of access to toilet facilities, consistent suppression of the urge to empty the bowels, and dehydration are other causes. Slow transit constipation involves impaired motor activity of the colon with infrequent bowel movements, straining to have a bowel movement, mild abdominal distention, and palpable stool in the sigmoid colon. Pelvic floor dysfunction (pelvic floor dyssynergia-anismus), or outlet dysfunction, is difficulty passing stool due to failure of the pelvic floor muscles or anal sphincter to relax with a bowel movement. Examples include pelvic

floor dyssynergia, rectal fissures or fistulas, strictures, or hemorrhoids.⁶⁻⁸

Secondary constipation may be caused by diet, drugs, or neurogenic disorders (e.g., stroke, Parkinson's disease, spinal cord injury, multiple sclerosis, Hirschsprung's disease) in which neurotransmitters or nerve pathways are diseased or degraded, resulting in delayed intestinal transit time. Antacids containing calcium carbonate or aluminum hydroxide; anticholinergic; iron; and bismuth tend to inhibit intestinal motility. Opioid-induced constipation is caused by drugs that activate β -opioid receptors in the gut. Endocrine or metabolic disorders associated with constipation include hypothyroidism, diabetes mellitus, hypokalemia, and hypercalcemia. Hiatal hernia (herniation of the intestine through the pelvic floor), diverticular disease, irritable bowel syndrome—constipation-predominant, and pregnancy are also associated with constipation. Aging can cause constipation caused by changes in neurons in the myenteric plexus and decreased function of neurotransmitters with decreased colon motility, use of drugs, and co-morbid medical conditions.⁴ Many mechanical conditions can slow down intestinal transit time. The abdominal muscles are normally used to create the intra-abdominal pressure needed to evacuate the rectum. Weakness or pain can prevent the creation of adequate intra-abdominal pressure. With the urge to defecate, the sphincter becomes hypertonic, and stool is not excreted. Depression often interferes with bowel evacuation, partly because depressed individuals tend to be sedentary and lack the motivation to eat healthily. The problem gets worse when antidepressant drugs (e.g., anticholinergics) are used to treat depression.⁹⁻¹³

Clinical manifestations

Indicators of constipation include two of the following for at least 3 months: (1) straining with a bowel movement at least 25% of the time, (2) lumpy or hard stools at least 25% of the time, (3) sensation of incomplete emptying at least 25% of the time, (4) manual maneuvers to facilitate the fecal evacuation of at least 25% of bowel movements, and (5) fewer than three bowel movements per week. Changes in bowel patterns, such as having fewer bowel movements, smaller stool volume, hard stools, difficulty passing

stools (straining), or a feeling of fullness and discomfort in the bowel or blood in the stool, warrant testing. Fecal impaction (hard, dry stool stuck in the rectum) is associated with rectal bleeding, abdominal pain or cramps, nausea and vomiting, weight loss, and episodes of diarrhea. Compression of the capillary perfusion of the intestinal wall can lead to ischemia and necrosis. Straining to evacuate stool can cause swollen hemorrhoidal veins and hemorrhoidal disease or thrombosis with rectal pain, bleeding, and itching. The passage of hard stools can cause painful anal fissures.¹⁴⁻¹⁶

Evaluation and treatment

Anamnesis, current medication use, physical examination, and stool diary provide good clues as to the nature of constipation. Constipation that occurs suddenly can accompany the development of colorectal cancer and requires careful evaluation. Individual descriptions of frequency, stool consistency, associated pain, and presence of blood or whether evacuation is induced by enemas or cathartics (laxatives) are important. Cramping abdominal pain may be a symptom of a partial bowel obstruction. Palpation reveals colonic distention, mass, and tenderness. Bleeding may be caused by bleeding hemorrhoids or neoplastic lesions of the colon.

Digital examination of the rectum and anorectal manometry were performed to assess sphincter tone and detect anal lesions. Colonoscopy is done with serious symptoms or to screen for colon cancer. Colon transit studies and imaging techniques can assist in identifying the etiology of constipation. Treatment for constipation is to manage the underlying cause or disease for each individual. Treatment usually consists of bowel retraining, in which the individual establishes a bowel evacuation routine that is satisfactory without becoming preoccupied with bowel movements. Moderate exercise, increased fluid and fiber intake, bulking agents, stool softeners, and laxative agents (bisacodyl and senna) are useful and inexpensive for some individuals. Glycerin suppositories and enemas can be used to establish a bowel movement routine but should not be used as a habit. Biofeedback training may be effective for defecation that is not synergistic.⁷ Medications used to

treat severe constipation include the colonic secretagogues lubiprostone, linaclotide, plecanatide, and 5-HT₄ prucalopride agonist. The peripherally acting opioid-receptor antagonists methylnaltrexone, naloxone, naloxegol, and alvimopan (for postoperative ileus) are used to treat opioid-induced constipation.¹⁷⁻

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2. Conclusion

Constipation is difficult or infrequent bowel movements. Constipation can occur as a primary or secondary condition.

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