Complete Summary

GUIDELINE TITLE

American Gastroenterological Association medical position statement: guidelines on constipation.

BIBLIOGRAPHIC SOURCE(S)

Locke GR, Pemberton JH, Phillips SF. American Gastroenterological Association medical position statement: guidelines on constipation. Gastroenterology 2000 Dec;119(6):1761-6. [1 reference]

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SCOPE

DISEASE/CONDITION(S)

Constipation

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Family Practice
Gastroenterology
Internal Medicine

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

- To identify a rational, efficacious, and ideally cost-effective approach to the patient presenting with constipation
- To assist clinicians in being efficient in excluding life-threatening or treatable conditions; identifying persons who may benefit from specialized testing; and developing effective therapy that will relieve symptoms as much as possible

TARGET POPULATION

Adults seeking medical care for constipation (excludes special populations, such as patients with spinal cord injury)

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Clinical Evaluation

1. Patient History
2. Physical examination
3. Laboratory evaluation, including, complete blood count, thyroid-stimulating hormone level, serum glucose, creatinine level, and calcium tests
4. Colonoscopy or flexible sigmoidoscopy
5. Barium enema
6. Colonic transit test (CTT)
7. Anorectal manometry (ARM)
8. Balloon expulsion test (BET)
9. Barium defecography
10. Defecating proctogram

Treatment/Management

1. Biofeedback
2. Increased fiber intake (bran, psyllium, methylcellulose, or calcium polycarbophil)
3. Saline agents, such as milk of magnesia
4. Stimulant agents, such as bisacodyl (Dulcolax), anthraquinones (senna, cascara [Senokot, Perdiem, Peri-Colace])
5. Hyperosmolar agents, such as sorbitol, lactulose (Chronulac), or polyethylene glycol (PEG, Golytely, Colyte, Miralax)
6. Stool softeners, such as Docusate sodium (Colace)
7. Glycerin suppositories
8. Enemas (mineral oil, tap water, phosphate, soapsuds)
9. Surgical treatment of slow-transit constipation
10. Pelvic floor retraining

MAJOR OUTCOMES CONSIDERED

- Prevalence of constipation
- Risk factors for constipation

- Economic impact of constipation
- Bowel movement frequency

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The background for the technical review, especially the subthemes comprising the clinical syndrome, their epidemiology, diagnosis, treatment, and their socioeconomic impacts have been subjects of recent reviews and monographs. These were supplemented by selected and focused literature searches.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Subjective Review

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review
Review of Published Meta-Analyses

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This document was approved by the Clinical Practice and Practice Economics Committee on March 4, 2000, and by the American Gastroenterological Association Governing Board on May 21, 2000.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions

Although physicians often focus mainly on the infrequency of bowel movements in the definition of constipation, patients have a broader set of complaints. The lower limit of normal stool frequency usually quoted is 3 per week, and 2 or fewer stools weekly has been included as one of the Rome consensus criteria for the symptom. In this Rome definition, frequency was only 1 of 6 prime features (including straining, hard stools, and a feeling of incomplete evacuation). It has been estimated that the symptoms encompassed by the patients' definitions are (in decreasing importance) straining, stools that are excessively hard, unproductive urges, infrequency, and a feeling of incomplete evacuation. In practice, it is not unusual for patients to describe constipation while having their bowels move often on a daily, and even more frequent, basis!

Clinical Subgroups

The symptom of constipation may arise secondary to another condition. These include primary diseases of the colon (stricture, cancer, anal fissure, proctitis), metabolic disturbances (hypercalcemia, hypothyroidism, diabetes mellitus), and neurologic disorders (parkinsonism, spinal cord lesions). Some of these will be amenable to specific therapies, but when they are not, the challenge remains one of symptomatic treatment of constipation.

On the other hand, constipation is the major feature of 2 disorders of colorectal motility.

Slow-Transit Constipation

Slow-transit constipation ("colonic inertia") is thought to have as a primary defect slower than normal movement of contents from the proximal to the distal colon and rectum. In some individuals, the basis for slow transit may be dietary or even cultural. In others, slow colonic transit probably has a true pathophysiologic basis, although little is known about these mechanisms. Indeed, it has been suggested

that there are 2 subtypes of slow-transit constipation: (1) colonic inertia, possibly related to decreased numbers of high-amplitude propagated contractions. These peristaltic sequences are thought to be the mechanism for the mass movement of colonic contents. Thus, their absence is expressed as prolonged residence times of fecal residues in the right colon and; (2) increased, uncoordinated motor activity in the distal colon that offers a functional barrier or resistance to normal transit. This distinction requires colonic manometry for its definition, although this technique is not generally available and is not appropriate for most patients, except in research settings.

Pelvic Floor Dysfunction

Pelvic floor dysfunction is the other major pathophysiologic condition. It features normal or slightly slowed colonic transit overall, but a preferential storage of residue for prolonged periods in the rectum. In this instance, the primary failure is an inability to evacuate adequately contents from the rectum. This functional defect in coordinated evacuation has received numerous names ("outlet obstruction", "obstructed defecation", "dyschezia", "anismus", "pelvic floor dyssynergia"). The plethora of pseudonyms expresses our incomplete understanding of the mechanisms and has complicated, and perhaps confused, what otherwise is an important concept.

Combination Syndromes

Combination syndromes are often observed clinically, in which elements of slow transit and disorders of evacuation coexist, often in conjunction with other features of the irritable bowel syndrome (IBS). The presence of pain as a major component should evoke this possibility.

Clinical Evaluation

Historical features are key, and the questioning of the patient must be specific. What feature does the patient rate as most distressing? Is it infrequency per se, straining, hard stools, unsatisfied defecation, or symptoms that occur between infrequent bowel movements (bloating, pain, malaise)? Presence of these last characteristics suggests underlying irritable bowel syndrome.

Pelvic floor dysfunction should be suspected strongly on the basis of a careful history and physical examination. Prolonged and excessive straining before elimination are suggestive; when evacuatory defects are pronounced, soft stools and even enema fluid may be difficult to pass. The need for perineal or vaginal pressure to allow stools to be passed or direct digital evacuation of stools is an even stronger clue. It is important to raise these questions early because evacuatory disorders do not respond well to standard laxative programs, and failure to recognize this component is a frequent reason for therapeutic failure.

The current regime and bowel pattern should be recorded. How often is a "call to stool" noted? Is the call always answered? What laxatives are being used, how often, and at what dosage? Are suppositories or enemas used in addition? How often are the bowels moved, and what is the consistency of the stools? Physicians and patients need to be aware that after a complete purge, it will take several days for residue to accumulate such that a normal fecal mass will be formed.

Importantly, many commonly used medications have constipation as a notable side effect (e.g., anticholinergics, calcium channel blockers). A full record of prescription and over-the-counter medications must be obtained.

The physical examination and screening tests, if deemed appropriate, should also eliminate diseases to which constipation is secondary (see technical review). Physical findings of more direct importance are confined to the perineal/rectal examination, but the following may be key:

- In the left lateral position, with the buttocks separated, observe the descent of the perineum during simulated evacuation and the elevation during a squeeze aimed at retention. The perianal skin can be observed for evidence of fecal soiling and the anal reflex tested by a light pinprick or scratch.
- During simulated defecation, the anal verge should be observed for any patulous opening (suspect neurogenic constipation with or without incontinence) or prolapse of anorectal mucosa.
- The digital examination should evaluate resting tone of the sphincter segment, and its augmentation by a squeezing effort. The voluntary external anal sphincter will be tightened by squeezing; the internal sphincter will not. Above the internal sphincter is the puborectalis muscle, which should also be palpated during the squeeze and compressed between the examining finger and the thumb. Acute localized pain along the border of the muscle is a feature of the puborectalis spasm syndrome. Finally, the patient should be instructed to integrate the expulsionary forces by requesting that she/he "expel my finger".
- An examination should then be made to look for a rectocele, or consideration be given to gynecologic consultation.

After the initial history and physical, a set of focused tests should be considered to exclude disorders that are either treatable (e.g., hypothyroidism) or important to diagnose early (e.g., colon cancer). However, data do not exist to strictly evaluate and define the tests that need to be done. Complete blood cell count and thyroid-stimulating hormone and serum glucose, creatinine, and calcium tests are inexpensive and serve a screening function. A structural evaluation of the colon is appropriate, especially if the patient is older than 50 years or has not had previous screenings for colorectal cancer and colitis. Colonoscopy or flexible sigmoidoscopy and barium enema should effectively exclude lesions that could cause constipation.

If this evaluation leads to a diagnosis, the appropriate treatment can be offered. The patient's medications can be adjusted when possible to avoid those with constipating effects. Advice regarding exercise and water intake should be provided and a trial of fiber instituted.

At the conclusion of this initial evaluation, the patient complaining of constipation can be tentatively diagnosed as having:

1. Irritable bowel syndrome when pain and the other features of irritable bowel syndrome are present;
2. Slow-transit constipation;
3. Rectal outlet obstruction;
4. A combination of slow-transit constipation and rectal outlet obstruction;

5. Organic constipation (mechanical obstruction or drug side effect); or
6. Constipation secondary to systemic disease.

Diagnostic Tests

The initial management of constipation as outlined above should be performed by a primary care provider. Patients who do not respond to these measures can be considered refractory. Such patients may benefit from special testing and treatments; these can be presented most simply as an algorithm (see Algorithm 1 in the original guideline document).

Interpretation of any single test must be guarded, because it must be recognized that patient cooperation comprises an important voluntary component of most tests of anorectal function. The tests themselves must be in a setting as private as possible, to reduce embarrassment and facilitate cooperation, but ideal conditions are often not possible.

Medical Management

Algorithms 2 and 3 in the original guideline document show treatments for the clinical subgroups. The guideline developers suggest a gradual increase in fiber intake, as both foods included in the diet and as supplements. If more treatment is needed, the simplest program should begin with an inexpensive saline agent, such as milk of magnesia. Only later should stimulant agents (Dulcolax) or more expensive agents such as lactulose and polyethylene glycol be considered.

However, before therapeutic regimens are initiated, major decisions need to be made relating to the contribution of pelvic floor dysfunction. Is the role of impaired evacuation sufficient to justify an intensive program of education and practice? Formal evaluations of biofeedback training in constipation are sparse, and important practical details of individual programs are often not stated. However, results from the best integrated programs are impressive. The motivation of the patient and therapist, together with the frequency and intensity of the retraining program, likely contributes importantly to the chances of success. The program offered at the Mayo Clinic, for example, features 3 daily outpatient sessions for 2 weeks. In addition to biofeedback therapists, dietitians and behavioral psychologists participate. Although the results of biofeedback in children have been disappointing, intensive programs in adults can have a better than 75% success rate.

Place of Surgery and Pelvic Floor Retraining Program

Surgical Treatment of Slow-Transit Constipation

The treatment of colonic inertia-- when well documented and assuming failure of an aggressive, prolonged trial of laxatives, fiber, and prokinetic agents-- is total colectomy with ileorectal anastomosis. Patients need to be told that the procedure is designed to treat the symptom of constipation and that other symptoms (e.g., abdominal pain) may not necessarily be relieved, even though regular defecation may be achieved. Even in a tertiary center with a strong presence of surgical referrals, only 5% of this highly selected cohort justify surgical treatment.

Pelvic Floor Retraining

Biofeedback and relaxation training have been quite successful and, importantly, free of morbidity. Biofeedback can be used to train patients to relax their pelvic floor muscles during straining and to correlate relaxation and pushing to achieve defecation. By the relearning process, the nonrelaxing pelvic floor is gradually suppressed and normal coordination restored. It should be pointed out that biofeedback is also used in the treatment of fecal incontinence. There are, however, major differences between the approaches to fecal incontinence and constipation. The incontinent patient with intact neural pathways is able to appreciate a sensation of muscular contractile activity, whereas the constipated patient does not have a similar sensation of muscular relaxation. Nevertheless, biofeedback has been shown to reduce obstructive symptoms, with an increase in the frequency of bowel actions, the ability to develop a more obtuse anorectal angle at the time of defecation, and more dynamic pelvic floor movements when the anal sphincter is contracted.

CLINICAL ALGORITHM(S)

Algorithms are provided for the diagnosis of refractory constipation, the treatment of normal- and slow-transit constipation, and for pelvic floor dysfunction and slow-transit constipation.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The discussion of the epidemiology of constipation is based on peer-reviewed, published surveys. Estimates of the economic impact to society have been published; however, formal cost-effectiveness analysis for specific diagnostic and therapeutic algorithms have not been performed. There are few well-designed clinical trials of therapy, and only one meta-analysis of comparable studies has been published. Most evidence is, therefore, based on clinical experience, descriptive studies, and reports of expert committees.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Identification of selected patients with constipation who might benefit from additional testing or more specific treatments. By doing this, scarce health care resources may be used most efficiently.
- Exclusion of life-threatening or treatable conditions, identification of persons who may benefit from specialized testing, and development of effective therapy that will relieve symptoms as much as possible.

Subgroups Most Likely to Benefit:

Patients who fail to respond to initial laxative treatments, and may have slow-transit constipation or pelvic floor dysfunction

POTENTIAL HARMS

Side effects of medications commonly used for constipation are detailed in Table 4 of the technical review of the guideline. Bloating, flatulence, cramping, and incontinence due to potency of the medications are the most common side effects.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

The sensitivity of the diagnostic tests for constipation has not been established; indeed, the details of their performances have not been well specified. Although there is general agreement as to the preferred approach the recommendations represent, at this time, the views of the authors. The issue of the best diagnostic approach is compounded further, because interpretation of any single test must be guarded. It should be recognized that patient cooperation is a key voluntary component of most tests of anorectal function (e.g., expulsionary efforts, squeeze pressures). Patients may be restricted by feelings of inadequate privacy, and these voluntary components will, of necessity, vary among patients, and even for the same person at different times. Thus, the tests should be in a setting as private as possible, to reduce embarrassment and facilitate cooperation, but ideal conditions are rarely possible. The authors list in order of simplicity, cost, and general use, the studies referred to in the clinical algorithm accompanying the guideline. However, none of these has been subjected to strict evaluation of specificity and sensitivity.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Locke GR, Pemberton JH, Phillips SF. American Gastroenterological Association medical position statement: guidelines on constipation. Gastroenterology 2000 Dec;119(6):1761-6. [1 reference]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2000 May 21 (reviewed 2001)

GUIDELINE DEVELOPER(S)

American Gastroenterological Association - Medical Specialty Society

SOURCE(S) OF FUNDING

American Gastroenterological Association

GUIDELINE COMMITTEE

American Gastroenterological Association Clinical Practice and Practice Economics Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

ENDORSER(S)

American College of Gastroenterology - Medical Specialty Society
American Society for Gastrointestinal Endoscopy - Medical Specialty Society

GUIDELINE STATUS

This is the current release of the guideline.

An update is not in progress at this time.

According to the guideline developer, the Clinical Practice Committee meets 3 times a year to review all American Gastroenterological Association guidelines. This review includes new literature searches of electronic databases followed by expert committee review of new evidence that has emerged since the original publication date.

This guideline has been reviewed by the developer and is still considered to be current as of Dec 2001.

GUIDELINE AVAILABILITY

Electronic copies: Available from the American Gastroenterological Association (AGA) Gastroenterology journal Web site.

Print copies: Available from American Gastroenterological Association, 4930 Del Ray Avenue, Bethesda, MD 20814.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Locke GR 3rd; Pemberton JH; and Phillips SF. AGA technical review on constipation. Gastroenterology. 2000 Dec;119(6):1766-78. [262 references].

Electronic copies: Available from the American Gastroenterological Association (AGA) Gastroenterology journal Web site.

Print copies: Available from American Gastroenterological Association, 4930 Del Ray Avenue, Bethesda, MD 20814.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on June 5, 2002. The information was verified by the guideline developer on July 12, 2002.

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