Managing an Elderly Resident with Fecal Incontinence

Syed H. Tariq, MD, FACP

A 75-year-old female is admitted to a nursing home, and the staff has noted that she has fecal incontinence. What does a nursing home practitioner need to do to treat her fecal incontinence?

Prevalence of fecal incontinence in the nursing home exceeds 50%.\textsuperscript{1,2} *Double incontinence* (ie, fecal incontinence and urinary incontinence) is 12 times more common than fecal incontinence alone, with 50-70\% of persons with urinary incontinence also suffering from fecal incontinence.\textsuperscript{3-5} Both urinary and fecal incontinence are the second most common cause of institutionalization in the elderly.\textsuperscript{6,7}

Fecal incontinence is a marker for poorer overall health and is associated with increased mortality.\textsuperscript{1,8} Nursing home residents with incontinence experience more urinary tract infections and pressure ulcers.\textsuperscript{9} The total health care costs attributable to fecal incontinence are difficult to determine, as few studies have examined health care costs for fecal incontinence alone.

**RISK FACTORS AND CAUSES OF FECAL INCONTINENCE**

Risk factors for fecal incontinence include a prior history of urinary incontinence, the presence of neurological or psychiatric disease, poor mobility, age greater than 70 years, and dementia.\textsuperscript{3,10,11} Possibly the most common predisposing condition to fecal incontinence in the nursing home is fecal impaction, which is reported in up to 42\% of elderly patients admitted to geriatric units.\textsuperscript{12} Causes of fecal incontinence are outlined in the Table.

There are three main types of fecal incontinence: *overflow incontinence* is especially seen in cognitively impaired, bedridden nursing home residents; *reservoir incontinence* occurs in conditions that diminish colonic or rectal capacity, and is seen in persons with radiation proctopathy, chronic rectal ischemia, idiopathic inflammatory bowel disease, and proctocolectomy with ileoanal anastomosis; and *rectosphincteric incontinence* is seen in conditions associated with structural damage to one or both anal sphincters.

**EVALUATION OF FECAL INCONTINENCE**

Identification of patients with fecal incontinence is the single most important factor. It is helpful to identify when the symptoms first occurred, and to determine whether the person feels any sensation, such as the passage of stool or gas, fullness in the rectum, or such warning symptoms as abdominal cramps and urgency. Information should be gathered about some of the chronic medical conditions that might be contributing to incontinence, such as diabetes, cerebrovascular disease, cord compression, constipation, advanced dementia, immobility, trauma to the anal canal, and/or radiation. A history of previous anorectal surgery can also be helpful.

Dr. Tariq is assistant professor and Medical Director of the Acute Care of Elderly (ACE) Unit, Division of Geriatric Medicine, Saint Louis University, MO.
A review of medications, including over-the-counter medicine and supplements, may reveal an underlying cause for the altered bowel habits. Medicines that can cause diarrhea in some persons include magnesium-containing antacids and poorly absorbed sugars, such as sorbitol and mannitol (used in dietetic products and theophylline elixir). The intentional or inadvertent use of cathartics may contribute to diarrhea and incontinence. Similarly, a medication responsible for constipation may cause a worsening of incontinence via an overflow phenomenon.

The usual physical examination is supplemented by paying attention to the anorectal area. The perineum should be inspected for dermatitis, hemorrhoids, fistula, surgical scars, rectal prolapse, soiling, and ballooning of the perineum (suggesting weakness of the pelvic floor). Following inspection, a digital rectal examination is required, checking for baseline sphincter tone, squeeze pressure, any asymmetry of the sphincter on squeeze, and the amount and character of the stool. The positive predictive value of digital examination is 67% for detecting decreased anal tone as compared to anal manometry. The neurological examination includes assessment of general patient mobility, motor strength, and sensory testing.

**DIAGNOSTIC TESTS**

In the elderly population, it is important to exclude fecal impaction. Even in the absence of stool in the rectal vault, a higher impaction may be present. If the patient is at risk (discussed above), a plain abdominal radiograph is required to exclude high impaction. (KUB [kidney, ureters, bladder] can show both impaction, which would be seen as an obstructive pattern resulting from impaction, or the presence of stools mixed with air bubbles in the colon, which would exclude impaction.) A flexible sigmoidoscopy or colonoscopy is recommended to examine the colorectal mucosa for evidence of colitis, neoplasia, inflammatory bowel disease, colonic and rectal ischemia, laxative abuse, and other structural abnormalities. Anorectal manometry gives either new information or confirms the suspected diagnosis in patients with fecal incontinence. Overflow incontinence could result from decrease in rectal compliance (ie, a stiff rectum, which does not accommodate the stool bolus, resulting in incontinence). Anal ultrasound or magnetic resonance imaging (MRI) helps to identify any defects in the internal and external anal sphincters. Not all patients require all tests. An algorithm outlining one possible diagnostic and management strategy is shown in the Figure.

**TREATMENT**

The treatment of fecal incontinence depends on the underlying etiology and severity of the incontinence.

**Conservative Therapy**

Patients with a mental impairment such as in dementia may simply need to be directed to the toilet or reminded of such use. Physical limitations and environment obstacles need to be addressed if these are contributing to incontinence, as they can often be overcome by simple measures. Habit training involves a regular schedule of defe-
Fecal incontinence continues

- Add high-fiber diet
- Antidiarrheal for loose stool
- Regular post-meal bowel regimen

Exclude fecal impaction in elderly
Investigate and treat diarrhea

Fecal incontinence continues

Ambulatory
- Prompted defecation
  - Failed
  - Improved
- Scheduled osmotic laxative and/or stimulant laxative, if still constipated or on narcotics, and/or scheduled enemas

Bed-bound

Anorectal manometry

Biofeedback
- Improved
- Failed

Anal ultrasound

Defect (-)
- Defect (+)

Sphincteroplasty (if expertise available)
- Failed
- Improved

Colostomy (rarely required) or treat as bed-bound

cation, usually after breakfast, often incorporating the use of supplemental fiber and regularly scheduled enemas when defecation is delayed more than two days. Habit training is particularly effective for patients with overflow incontinence.\textsuperscript{15} It has been shown that prompted voiding increases the number of continent bowel movements and reduces the number of incontinent bowel movements. Sphincter training exercises (eg, Kegel exercises) alone do not increase the number of continent episodes.\textsuperscript{16} Nocturnal diarrhea is primarily seen in patients with diabetes. In such cases, topical clonidine may be used. A trial of cholestyramine may be helpful if bile acid malabsorption is suspected. Antidiarrheals, such as loperamide, codeine, or diphenoxylate with atropine, all have been shown to reduce the stool frequency, but loperamide and codeine were more effective in reducing fecal incontinence as compared to diphenoxylate, and should be used only once infectious causes are excluded.\textsuperscript{17} Diphenoxylate and codeine have more central nervous system side effects than loperamide, and are generally best to avoid in the elderly in this setting.

\textit{Biofeedback} is classically described as a learning theory with operant conditioning. It is a nonsurgical, noninvasive, relatively inexpensive outpatient method of treating fecal incontinence. Biofeedback for fecal incontinence involves improving the strength of the external sphincter and improving anorectal sensation. It provides immediate and long-term improvement of fecal incontinence. Better results are achieved when treating motivated, mentally capable patients. Whitehead et al\textsuperscript{16} conducted a study on geriatric patients who were treated initially for fecal incontinence and those with identifiable anatomic defects. Surgical intervention includes sphincter repair, neosphincter operations, artificial anal sphincter implantation, injections of glutaraldehyde, and sacral nerve stimulation. These procedures have been described in younger individuals, but their performance in elderly nursing home residents has not been reported. Finally, for severe fecal incontinence, when all the other procedures have failed, diverting colostomy may be a final option.

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\section*{References}