

The presenting complaint for constipation with soiling is typically a complaint of uncontrolled defecation in the underwear. Parents may report that the child has diarrhea because of soiling of liquid stool. Soiling may be frequent or continuous. On further questioning, the clinician learns that the child is passing large-caliber bowel movements that may occasionally block the toilet. Children younger than 3 years of age often present with painful defecation, impaction, and withholding. The history should include a complete review of systems for gastrointestinal, endocrine, and neurologic disorders and a developmental and psychosocial history.

**Stool impaction** can be felt on abdominal examination in about 50% of patients at presentation. Firm packed stool in the rectum is highly predictive of fecal impaction. A rectal examination allows assessment of sphincter tone and size of the rectal vault. Evaluation of anal placement and existence of anal fissures also is helpful in considering etiology and severity. A neurologic examination, including lower extremity reflexes, anal wink, and cremasteric reflexes, may reveal underlying spinal cord abnormalities.

Abdominal x-ray is not required. It can be helpful to show to the family the degree of colonic distention and fecal impaction. In general further studies, such as barium enema and rectal biopsy, are indicated only if an organic cause for the constipation is indicated by history or physical examination (see Chapter 129). Similarly although endocrinologic conditions such as hypothyroidism can cause chronic constipation, laboratory studies are not indicated without history or physical examination suggesting such a disorder.

### Differential Diagnosis

The differential diagnosis for functional constipation and soiling includes organic causes of constipation (e.g., neurogenic, anatomic, endocrinologic, gastrointestinal, and pharmacologic). A child with chronic constipation and soiling who had delayed passage of meconium and has an empty rectum and tight sphincter may have Hirschsprung disease (see Chapter 129). Chronic constipation may be a presenting sign of spinal cord abnormalities, such as a spinal cord tumor or a tethered cord. Physical examination findings of altered lower extremity reflexes, absent anal wink, or a sacral hairy tuft or sacral sinus may be a clue to these anomalies. Hypothyroidism can present with chronic constipation and typically is accompanied by poor linear growth and bradycardia. Anal stenosis may lead to chronic constipation. The use of opiates, phenothiazine, antidepressants, and anticholinergics also may lead to chronic constipation. Developmental problems, including mental retardation and autism, may be associated with chronic constipation.

### Treatment

Treatment begins with education and demystification for the child and family about chronic constipation and soiling, emphasizing the chronic nature of this condition and the good prognosis with optimal management. Explaining the physiologic basis of constipation and soiling to the child and the family alleviates blame and enlists cooperation. Education may improve adherence to the long-term treatment plan (Table 14-1). One half to two thirds of children with functional constipation recover completely and no longer require medication.

**Table 14-1** Education about Chronic Constipation and Soiling

Constipation affects 16% to 37% of children.
1% to 4% of children have functional constipation and soiling.
Functional constipation with/without soiling begins early in life due to a combination of factors:
Uncomfortable/painful stool passage
Withholding of stool to avoid discomfort
Diets higher in constipating foods and lower in fiber and fluid intake*
Use of medications that are constipating
Developmental features—increasing autonomy; perhaps toilet avoidance
Possible family genetic factors—slower colonic transit
When chronic impaction, physiologic changes at the rectum reduce a child's bowel control.
Dilated rectal vault results in reduced sensation to standard fecal volume.
Rehabilitation of rectal musculature and strength requires several months. Until then, dilated rectal musculature may be less able to expel stool effectively.
Paradoxical anal sphincter contraction may occur when the urge to defecate is felt; it can lead to incomplete emptying of stool at defecation attempt.
Many children do not recognize their soiling accidents owing to olfactory accommodation.
Low self-esteem or other behavioral concerns are common on presentation. Improve for most with education and management for the constipation and soiling.
Effective management of functional constipation requires a substantial commitment of the child/family, usually for 6–24 mo.
Degree of child and family adherence is likely a predictor of the child's success.

\*The common features of the transition to the toddler diet (decreased fluid intake, continued high dairy intake, and *finicky* eating patterns) make this a high-risk time during development for constipation problems.

The younger the child is when diagnosis and treatment begin, the higher the success rate. Treatment involves a combination of behavioral training and laxative therapy. Successful treatment requires 6 to 24 months. The next step is adequate colonic cleanout or disimpaction. Clean-out methods include enemas alone or combinations of enema, suppository, and oral laxatives. High-dose oral mineral oil is a slower approach to clean-out. Choice of disimpaction method depends on the age of the child, family choice, and the clinician's experience with a particular method. Methods and side effects are summarized in Table 14-2. The child and family should be included in the process of choosing the clean-out method. Because enemas may be invasive and oral medication may be unpleasant, allowing points of choice and control for the child and praising all signs of cooperation are important.

**Behavioral training** is essential to the treatment of chronic constipation and soiling. The child and family are asked to monitor and document stool output. Routine toilet sitting is instituted for 5 to 10 minutes three to four times per day. The child is asked to demonstrate proper toilet sitting position with the upper body flexed forward slightly and feet on the floor