Frequency of Digital Rectal Examination in Children With Chronic Constipation

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Objectives: To determine the frequency of performance of digital rectal examination by primary care practitioners on children with chronic constipation and to assess its effect on therapy.

Patients and Methods: One hundred twenty-eight children referred for chronic constipation to the Division of Pediatric Gastroenterology at Schneider Children’s Hospital, New Hyde Park, NY, as well as their parents were questioned as to whether a digital rectal examination was ever performed prior to referral. All children underwent subsequent digital rectal examination by a pediatric gastroenterologist and recommended treatment regimens were compared with pretreatment regimens. The patients evaluated were a mix of private-insurance and Medicaid patients referred by pediatricians in the general community.

Results: Ninety-eight (77%) of the children referred for chronic constipation were found to have never had a digital rectal examination performed prior to referral. Fifty-three (54%) of these children were found to have fecal impaction. Only 19 (21%) were found to have minimal to no stool retention on digital examination. Enema therapy had been infrequently used to “clean out” the colon in referred children. Seventy percent were treated with multiple enema therapy following digital rectal examination. Organic causes of constipation were identified in 3 patients.

Conclusions: Digital rectal examination is often not performed in the examination of the child with chronic constipation. The digital examination can help differentiate functional constipation from an organic process and may alter the course of therapy.


Editor’s Note: Three messages from this study: (1) It’s time to put on the gloves, (2) make sure you can recognize a fecal impaction (!), and (3) remember that the treatment of chronic constipation is not rocket science—unless you consider suppositories rockets.

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Chronic constipation is a common pediatric problem. It is estimated that up to 25% of children referred to pediatric gastroenterologists suffer from chronic constipation. Among the children presenting with a chief complaint of constipation, most suffer from functional (idiopathic) constipation, with organic causes occurring rarely. Proper assessment and therapeutic intervention of the constipated child depends on a complete history and physical examination, including digital rectal examination. Organic causes of constipation may not be diagnosed if physicians fail to perform a digital rectal examination. Failure to perform a rectal examination may also lead the physician to prescribe an inadequate treatment regimen for the child. This study was performed to assess the frequency with which digital rectal examination was performed on children with chronic constipation prior to referral to a pediatric gastroenterologist, as well as its effect on treatment regimens.

RESULTS

One hundred twenty-eight children were included in the study. The mean age was 50.4 months (range, 1 month to 13 years), with the mean duration of constipation being 23.3 months (range, 3 weeks to 96 months). Thirty-five had encopresis, defined as fecal soiling greater than 2 times per week. Thirty-five had encopresis, defined as fecal soiling greater than 2 times per week. Thirty-five had encopresis, defined as fecal soiling greater than 2 times per week. Treatment regimens prior to referral included dietary changes, suppository administration, and lubricant and stimulant laxatives, with dosing primarily based on the package insert recommendation. Less frequently, phosphate enemas were administered prior to referral. Of the 128 patients, 98 (77%) never had
SUBJECTS AND METHODS

During a 6-month period, all children referred by their primary care physicians to the Division of Pediatric Gastroenterology at Schneider Children’s Hospital of Long Island Jewish Medical Center, New Hyde Park, NY, for a chief complaint of constipation were included in the study. All parents and children were questioned as to the duration of the child’s constipation as well as whether a digital rectal examination had ever been performed by the primary care physician prior to referral. Previous treatment regimens were ascertained. All children referred for a chief complaint of constipation underwent digital rectal examination by the pediatric gastroenterologist. Findings were documented and recommended therapeutic regimens were then compared with prior regimens.

Of the 128 patients, 66 (52%) had received previous therapy. Of the total 128 patients, 66 (52%) had received previous therapy. Of these, 47 (71%) had not had prior digital rectal examination. Of the patients with previous rectal examination (n = 30), 16 (53%) were found to have fecal impaction at the time of referral, with only 8 (27%) having minimal to no stool noted on rectal examination. All 8 patients had been treated with enema therapy prior to referral, although on an intermittent basis. Only 1 additional patient with prior rectal examination was treated with intermittent enemas.

Of the total 128 patients, 66 (52%) had received stimulant laxative therapy prior to referral. Of these, 47 (71%) had not had prior digital rectal examination. Organic causes of constipation were identified in 3 patients. Two patients who did not have a prior rectal examination were found on rectal examination to have an anterior rectal mass caused by hematocolpos. A third patient who reportedly had prior rectal examination was found to have anal stenosis. Additional possible contributing factors to the presenting complaint of constipation were identified in 3 patients who did not have prior rectal examination, including 2 with large anal fissures and one with sacral asymmetry.

Our treatment recommendations following evaluation were as follows: in the group without prior rectal examination (n = 98), 69 were treated with aggressive enema therapy followed by high-dose laxatives, 15 were treated with aggressive laxative therapy without enemas, 3 were treated with mineral oil, and 9 (all infants aged <7 months) were treated with conservative therapy. In the group that had prior digital rectal examination (n = 30), 20 were treated with aggressive enema therapy followed by laxative therapy, 6 were treated with aggressive laxative therapy without enemas, and 4 (all infants aged <4 months) were treated with conservative therapy. In the group that did not have previous digital examination, the 2 patients who had hematocolpos with subsequent surgery were excluded from treatment recommendations. Laxatives were used without enemas if the child had only a mild to moderate amount of soft stool present on rectal examination or if it was deemed that the parents would not be able to properly administer the enema. The dose of the laxative was adjusted to achieve 1 to 2 soft daily bowel movements, even if this exceeded the recommended dosing on the package insert. Patients in the conservative therapy category were infants younger than 7 months who were treated with either glycerin suppositories, malt soup extract, or corn syrup solids.

Chronic constipation can be a frustrating therapeutic dilemma for the physician, child, and family. A successful outcome often requires prolonged therapy and strict compliance from both the family and child. Often, the family stops therapy because they believe it is ineffective. However, a frequent contributing factor for poor response to therapy is unrecognized significant stool retention or fecal impaction. While stimulant laxatives may be beneficial in the child with mild to moderate stool retention, they are often ineffective as initial therapy in the child with fecal impaction and often contribute to increased abdominal cramping in these patients. In addition, children with long-standing severe stool retention are often initially treated with the standard recommended dose of laxative noted on the package insert; this may be insufficient to achieve a clinical response.

An important issue in determining the type of therapy for the child with chronic constipation is assessing the degree of fecal retention, as well as ruling out potential organic causes. This is best done by performance of an abdominal and digital rectal examination and visual inspection of the perianal region. While digital rectal examination might not fully identify all organic causes of chronic constipation, it may provide important supportive evidence that leads to further diagnostic testing. Hirshsprung disease, in particular, is frequently suspected in the child presenting with chronic constipation. While the digital rectal examination is not diagnostic, certain findings will support this diagnosis and lead to further, more definitive testing. Digital rectal examination is also essential in the child with encopresis to help differentiate overflow soiling from nonretentive encopresis, yet 32 (91%) of the 35 children presenting with encopresis did not have a rectal examination performed by the primary care practitioner. Overall, 77% of 128 referred children did not have a digital rectal examination performed prior to referral. Scholer et al also recently documented the infrequent use of digital rectal examination in children, although their study looked at children presenting to a clinic or emergency department with acute abdominal pain. Possible reasons for the failure to perform a rectal
examination include the physician being uncomfortable with performing the procedure and concern over possibly traumatizing the child or damaging the physician-child relationship. In the case of the primary physician being uncomfortable with the procedure, the referral to the pediatric gastroenterologist might be specifically so that the specialist can perform the digital examination, although this seems to be an unlikely reason for referral. Another possible reason for the lack of a digital rectal examination is that the child’s history may not suggest the extent and degree of retention present. The presentation of fecal impaction can be subtle and non-specific, leading the practitioner to suspect a lesser degree of stool retention. In cases in which a digital rectal examination cannot be performed, or the results of the examination are not consistent with the history, an abdominal radiograph may yield useful information regarding the degree and location of stool as well as degree of dilatation of the bowel. One must question whether recall bias can play a role in the parents or child remembering whether a digital rectal examination had been performed. However, it is highly unlikely that a child’s parent(s) would leave the room prior to examination after supplying their child’s medical history, or that primary care physicians would perform a digital rectal examination without the child’s parent(s) being present in the room and first informing the parents of their intentions.

Supplying a strict definition for chronic constipation based solely on duration of symptoms is difficult. Chronic constipation might be better defined as an alteration of bowel movement frequency and/or consistency or a failure to achieve complete evacuation of the lower colon, independent of stool frequency or consistency, leading to gastrointestinal symptoms. Because the 128 patients seen in this study were referred for subspecialty consultation, they presumably represent those with more severe, prolonged constipation that has not responded to the parents’ or primary care physicians’ interventions. Non-referred children may have milder degrees of constipation that are self-limited. In this context, a digital rectal examination may not need to be performed on all children with an altered bowel movement pattern, but care must be taken in obtaining a complete history and abdominal examination to successfully identify those patients with more significant constipation who do require digital examination. In general, any child requiring more aggressive therapy than diet manipulation or fiber supplementation to control constipation should undergo digital rectal examination as part of the evaluation. In most cases, a carefully performed digital rectal examination causes a minimal degree of physical or emotional trauma to the child. The findings on the rectal examination will form the basis of the treatment regimen. Of note in our study is the fact that there was no difference in the prevalence of fecal impaction in those with prior rectal examination (53%) and those without prior rectal examination (54%), implying that the degree of retention was either underappreciated by the primary care practitioner or that inadequate therapy was instituted despite the performance of a digital rectal examination. The majority of children in our study (89 of 128) were found to have significant stool retention or fecal impaction and were initially “cleaned out” with a regimen of multiple phosphate enemas prior to the institution of a stimulant laxative. This is in contrast to only 19 who received occasional enema therapy prior to referral and only 1 who received aggressive enema therapy prior to referral.

Three patients (2%) had identified organic causes for their constipation. In the 2 patients with hematocolpos, an anterior mass with rectal canal narrowing was clearly identified on rectal examination. In the child with anal stenosis, a prior digital rectal examination had reportedly been performed, although the anal stenosis was not appreciated by the examining physician. In light of the infrequency of digital rectal examinations performed by the primary care physician, it is possible that abnormalities may not be appreciated due to the inexperience of the examining physician.

In conclusion, digital rectal examination is often not performed in the standard examination of the child with significant constipation. The digital rectal examination can help differentiate functional constipation from an organic process and often alters the course of therapy. It should be an essential part of the physical examination of the child presenting with this complaint.

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REFERENCES