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Bowel Management Can Be Successful for Most Patients with Fecal Incontinence

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Fecal incontinence is a devastating problem that affects about 25 percent of patients born with anorectal malformations; some patients who have had surgery for Hirschsprung's disease; patients born with pelvic tumors, spina bifida, or sacral agenesis; and those who have had severe pelvic trauma.

Bowel management is a method that can successfully prevent soiling among patients who have fecal incontinence. The goal is to keep patients clean for a 24-hour period between enemas by determining the correct mix, concentration and volume of enema ingredients.

Antegrade continence enema (ACE) procedures allow enemas to be administered at the top of the colon instead of through the rectum. They can be practical for some patients, such as those with spina bifida who use wheelchairs. However, we have become aware of many children who receive ACE procedures before having a successful bowel management regimen and, as a consequence, continue soiling. It is the enema, not its route, that is the key to success.

Our experience

Based on working with 495 fecally incontinent patients, including 294 patients treated since publishing our previous results, we have learned many lessons, and can achieve success with elimination of soiling in 95 percent of cases.

Determining true fecal incontinence

A key step in successful bowel management is to distinguish between true fecal incontinence and pseudoincontinence.

Cincinnati Children's
Colorectal Center

Patients with true fecal incontinence lack the ability to have voluntary bowel movements, either because they were born with malformations that prevent bowel control or because they lost the integrity of the anal canal after a previous surgery.

Patients with pseudoincontinence usually have no malformations or surgical complications. When these patients are treated with the right dosage of laxatives to empty their colon, they can return to voluntary bowel movements.

Since our last publication, related to bowel management implemented in 201 fecally incontinent patients, we have treated an additional 294 patients. We have learned important new facts, as well as new indications from this additional experience.

Week-long program changes outcomes

The bowel management program involves seeing patients in an outpatient setting for a week, monitoring the amount of stool in the colon with daily abdominal radiographs; and modifying the content, concentration and volume of the enema.

Of the most recent 294 patients, 220 had a tendency toward constipation and a dilated colon as seen via contrast enema. The remaining 74 patients had a tendency toward diarrhea and a non-dilated or short colon.

For the group with a tendency toward constipation, treatment included large enemas (500-1000 mL saline) with glycerin and /or soap and / or phosphate added as needed. For the group with tendency toward diarrhea, small normal-saline enemas were prescribed (200-450 mL), plus loperamide to slow the colon, pectin to firm the stool and a constipating diet.

The process of enema administration and emptying the colon should take no longer than one hour. The patient should receive the enema in about 15 minutes, hold the enema for 10 minutes, then sit on the toilet for 45 minutes. They then remain clean for 23 hours until the next enema.

Bowel management was considered successful when the patient's underwear remained totally clean for 24 hours.

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In this program, bowel management was successful in 279 patients, or 95 percent. Follow-up ranged from 6 months to 3 years. Ages for initiation of bowel management ranged from 3 to 31 years. Ideally it should be started at the age of potty training so children with fecal incontinence are clean and in normal underwear at the same time as their peers. In this study, the success rate was higher in patients with tendency toward constipation – 98 percent -- than in patients with tendency toward diarrhea – 84 percent.

Fifteen patients, or 5 percent, did not improve. The failure was more frequent in the group with tendency toward diarrhea. The most frequent causes were the inability to form solid stool and noncompliance with the enema regimen because of social or behavioral reasons.

Notably, five patients who were treated with long-term phosphate enemas developed symptoms of colitis, which resolved several weeks after discontinuing the phosphate enemas. Due to this problem which is luckily quite rare, we try to avoid phosphate if we can.

Observations

The patients in the program included 223 with anorectal malformation, 36 with Hirschsprung's disease, 12 with spina bifida, and 23 with miscellaneous causes.

Six patients had an ACE-type procedure performed at another institution, without a successful bowel management regimen, and were still having accidents.

In 13 patients, we performed bowel management through a “permanent” colostomy to determine the future possibility of a colostomy closure or pull-through surgery.

16 patients – who were not included in the 294 patients -- received bowel management for the treatment of severe, intractable diaper rash.

- Of the 13 patients who received bowel management through the colostomy, nine had an empty bag for 24 hours. So far, seven of these patients have had a pull-through operation, with enemas continuing either through an ACE or through the rectum. Interestingly, some patients had successful bowel management but decided to continue enemas through the stoma because having an empty bag for 24 hours represented a great improvement in their quality of life. For example, it allowed some to play sports without the risk of leakage from a full stoma bag.
- Our program also uses normal-saline solution, obtained from the pharmacy, as the main component of the enema rather than homemade water/salt solutions. We do this because

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hypernatremia, a potentially severe electrolyte disturbance, can result from inaccurate home preparations.

- Bowel management proved to be very successful in all cases with diaper rash. Treatment with small, mostly saline enemas (150-300 mL) resulted in several hours of dryness, making the rash disappear in about 48 hours.
- It is very clear that a short or hyperactive colon represents a serious problem because bowel management is more difficult to implement. Therefore, for patients with anorectal malformations, it is vital for surgeons to preserve as much colon as possible.

Conclusions

Although we have worked with patients of wide-ranging ages, we firmly believe that the best time to start bowel management is when the child would typically begin wearing normal underwear (ages 3 to 5).

We believe that the key to a successful bowel management program resides in tailoring the type of enema, medication, and diet according to whether a patient has a tendency toward constipation or a tendency toward diarrhea. The best way to determine the cleaning effect of an enema is with an abdominal film.

Keeping a patient clean is the ultimate goal. A perfect anatomic reconstruction in a patient who continues to soil does not accomplish much. With an effective bowel management program, thousands of children can get out of diapers and pull-ups and into normal underwear. Achieving this goal is more important and gratifying than the surgical procedures themselves.

We do recognize that an ACE procedure can be more practical for certain patients. However, an ACE procedure should be recommended only after proving that bowel management has been successful.

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