The Application of Percutaneous Endoscopic Colostomy to the Management of Obstructed Defecation


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PURPOSE: We describe the case of a 52-year woman with a 17-year history of obstructed defecation in whom all other standard treatments had failed and the patient had refused a colostomy. Her symptoms were controlled by percutaneous endoscopic colostomy with antegrade colonic irrigation.

METHOD: A percutaneous endoscopic colostomy tube was placed in the sigmoid colon endoscopically using a colonoscope and the patient irrigated two liters of water through the percutaneous endoscopic colostomy twice each day and was able to successfully evacuate her rectum without excessive straining or discomfort.

CONCLUSION: Percutaneous endoscopic colostomy is an alternative option to colostomy in the management of obstructed defecation. [Key words: Percutaneous endoscopic colostomy; Obstructed defecation; Pelvic floor]


Obstructed defecation is associated with distressing symptoms with the patient straining at stool repeatedly and for prolonged durations. Treatment with bowel regulation, laxatives, biofeedback, sacral nerve stimulation, or local procedures may not be successful. Retrograde enemas may be beneficial but are associated with complications. Antegrade irrigation via an appendicostomy or a colonic conduit has been used and is associated with some success. Both routes of irrigation are however associated with complications and necessitate either laparotomy, or laparoscopy in the case of appendicostomy, for placement. Formation of a conventional stoma is often successful in managing symptoms, but this is usually permanent and may be resisted by some patients.

Percutaneous endoscopic colostomy, which is placed with a colonoscope, has been used for the management of recurrent sigmoid volvulus and acute colonic pseudo-obstruction. Antegrade lavage has been used with a percutaneous endoscopic colostomy for delivery of anti-inflammatory agents to a patient with colitis. We report the case of the use of percutaneous endoscopic colostomy to manage a patient with obstructed defecation.

REPORT OF A CASE

A 52-year-old woman presented with a 17-year history of severe difficulty in evacuation. She was opening her bowels only once every three to four weeks, with intermittent episodes of fecal incontinence and passive soiling. She was only able to evacuate with the use of suppositories, and she suffered severe left-sided abdominal pains. She would spend up to nine hours each day in the toilet with constant straining. Use of strong laxatives resulted in fecal incontinence and she suffered severe left-sided abdominal pains. She would spend up to nine hours each day in the toilet with constant straining. Use of strong laxatives resulted in fecal incontinence.

Straining was associated with significant left iliac fossa pain, and she reported no sensation of rectal fullness. Her obstetric history consisted of a single child born 25 years previously by vaginal delivery; the child weighed 5 1/2 pounds at birth. She did not have an episiotomy, and there was no obstetric trauma. She underwent a hysterectomy 17 years previously. She was otherwise well. Abdominal examination was unremarkable and rectal examination reveals an intact ring of sphincter muscle with normal resting tone but no squeeze pressure. Rigid sigmoidoscopy was normal and barium enema showed mild sigmoid diverticulosis. Marker transit studies were performed and showed no colonic transit abnormality. Anorectal physiology showed lack of voluntary squeeze pressure but normal sensation to balloon distention. Rectoanal inhibitory reflex was present, but she was unable to expel a water-filled balloon and...
there was no active pelvic floor relaxation or downward propulsion of the balloon. Anal sensation to electrostimulation was normal, and there was prolonged pudendal nerve latency on the left and no pudendal nerve conduction on the right. The sphincters were intact on anal ultrasound. Spinal magnetic resonance imaging was normal. The diagnosis of obstructed defecation was made when the patient was symptomatic with difficulty in defecating associated with prolonged straining and failure of pelvic floor relaxation.

Her symptoms failed to improve with conventional interventions including oral laxatives, rectal suppositories and enemas, biofeedback, and transcutaneous sacral nerve stimulation. She was offered a traditional colostomy, which she refused. In the light of this, she was offered a percutaneous endoscopic colostomy.

**OPERATIVE TECHNIQUE**

After standard bowel preparation and intravenous administration of cefuroxime 750 mg (Glaxo, Greenford, UK), metronidazole 500 mg (Baxter, West Malling, UK), and midazolam (Hynovel; Roche, Welwyn Garden City, UK), an illuminated colonoscope was passed into the sigmoid colon. A 14-Ch gastrosomy tube (Freka, Frenius, Warrington, UK) was placed under local anesthesia using a standard percutaneous gastrostomy technique (Fig. 1). The patient was discharged home the same day. Informed consent had been obtained from the patient before the procedure.

The patient irrigated the percutaneous endoscopic colostomy (PEC) with 1 to 2 liters of water twice each day. She was able to evacuate within 10 minutes, had no further abdominal pain, and stopped all analgesics. She developed a small amount of fecal leakage around the PEC tube, and at 6 weeks this was replaced in outpatient treatment with a flat Mic-Key tube (Vygon, Cirencester, UK), which stopped all leakage. There have been no skin problems around the site of the tube. The patient remains asymptomatic at 6 months.

The Academy of Medical Royal Colleges for SERNIP (Safety and Efficacy Register of New Interventional Procedures) have approved the technique of percutaneous endoscopic colostomy as Category C (“safety and efficacy not proven: procedure should be used only as part of a primary research program”).

**DISCUSSION**

Obstructed defecation is a very difficult problem to manage successfully. The degree of intervention is dependent on the severity of the symptoms. Retrograde enemas can be successful but may not fully control symptoms and have been associated with perforation. Biofeedback, botulinum toxin injection, division of the puborectalis and anorectal myectomy have all been tried with varying degrees of success. Antegrade enemas via an appendicostomy were first used for chronic constipation and have been used for evacuatory disorders. They have produced good symptomatic results in children and adults but require surgery for formation and are prone to stenosis, with revision rates of up to 50 percent. Colonic conduits for antegrade enemas have been used with reasonable success, although placement involves complex surgery with the associated complications and a significant failure rate.

PEC is a simple, outpatient, endoscopic technique that allows access for antegrade colonic irrigation. It avoids the need for general anesthesia, laparoscopy or laparotomy. In our opinion, this approach should be considered for the management of symptomatic obstructed defecation when all conservative methods have been used without success (rectal suppositories and enemas, oral laxatives, and biofeedback) and when appendicostomy, colonic conduit, or colostomy are considered. It is continent, discreet, and, if no longer needed, easily reversed by cutting off the tube.