

Fecal Diversion in Management of Large Infected Perianal Lesions

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PURPOSE: The purpose of this manuscript is to present a method of temporary fecal diversion. **METHODS:** A tube was sutured into the anorectum of eight patients with large infected and/or necrotic perianal lesions that were being soiled and infected by the fecal stream. Five patients were diabetic, two had sacral pressure sores, and one suffered from hidradenitis suppurativa. **RESULTS:** Tubes remained in place from 10 to 14 days, during which time the infective condition was brought under control. There were no complications. **CONCLUSIONS:** The difficulties and disadvantages of current medical and surgical methods of controlling the fecal stream under these conditions are discussed, and the method presented is suggested as a viable and simple alternative. [Key words: Fecal diversion; Anorectal tube; Surgical technique]

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Lesions that involve the anal verge are nearly always contaminated by stool and have serious deleterious effects. These lesions are usually the result of progression of anorectal abscesses, less commonly from urinary tract infections or following trauma to the perineal area. At times, especially when the etiology is difficult to determine and the condition is advanced, the lesion goes under the name of Fournier's gangrene. The latter condition is more common in diabetic patients and the elderly. Irrespective of etiology, fecal contamination that exacerbates the condition is difficult to prevent, especially in older incontinent patients. Present methods of fecal control are largely ineffective and, at times, a colostomy is deemed necessary. This presentation is concerned with an alternative, minimally invasive, simple method of diverting stool long enough to reverse this clinical situation.

MATERIALS AND METHODS

Eight patients were seen with necrotizing infected lesions that encroached on the anal verge. Five pa-

tients, four males and one female with a mean age of 62 years, were diabetic; two females (mean age, 60) had large sacral pressure sores (Fig. 1); one male (34 years old) had extensive hidradenitis suppurativa. Wounds of all patients were cultured, and appropriate antibiotics were administered. When indicated, purulent collections were incised and drained, and necrotic material was radically excised under general or spinal anesthesia. At that time, it was considered that the fecal stream required diversion to control local sepsis. In some cases, the two patients with pressure sores, the decision to perform the diversion was made preoperatively; in these cases, diversions were performed before debridement.

Fecal diversion was obtained by the following method. Enemas and/or cathartics were administered to empty the bowel as much as possible. With the patient in the lithotomy or jackknife position, the anus, if not patulous, was gently stretched. Several elderly and incontinent patients did not require dilation. The rectum is digitally emptied as much as possible. A 25-cm long latex tube, the end of which is reinforced by a collar of fabric (Fig. 2), was sewn into the anorectum at as high a level as possible. The purpose of the fabric collar is to prevent the sutures from cutting through the latex tube. The tube is placed in the anorectum with the collar lying inferiorly and the rest of the tube pushed into the rectum to a higher level. Using a taper point needle, two stay sutures of 3-0 silk or a polyglycolic acid derivative are passed through the bowel wall at a submucosal level and fabric collar of the tube opposite each other, either at the 3 and 9 o'clock or the 6 and 12 o'clock positions, and tied. The long end of each suture is then run (Fig. 3) using an interlocking stitch that picks up the submucosa of the bowel and fabric collar. After each suture completes a half-circle, they are tied together. An instrument is then passed through the

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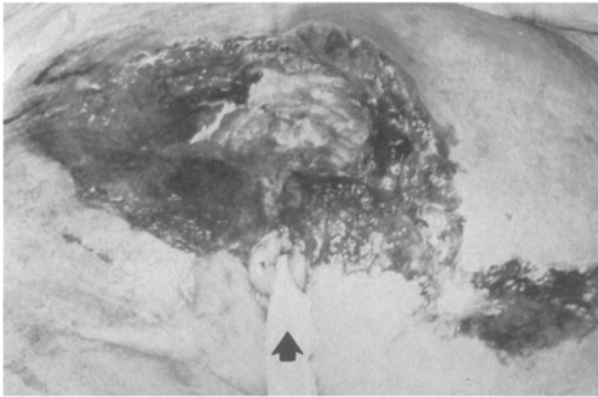


Figure 1. A 62-year-old female with a necrotic sacral ulcer involving the anal verge. A latex tube has been sewn into the anorectum and is seen emerging from the anal orifice. The patient underwent debridement and bilateral gluteal maximus muscle transposition.

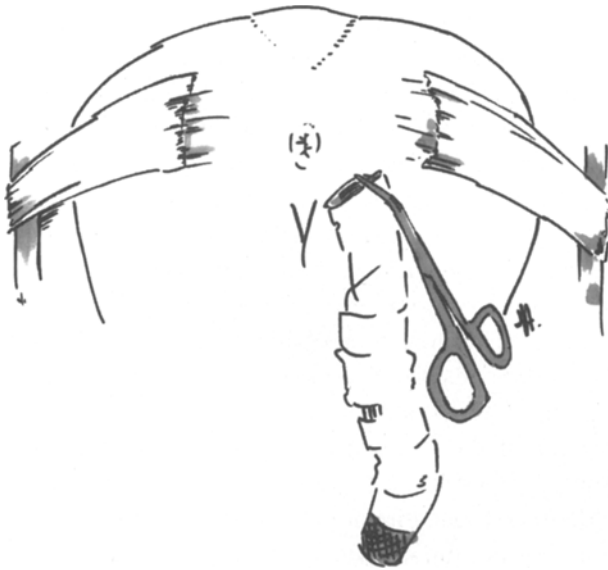


Figure 2. Patient is depicted in the jackknife position with buttocks held apart by strapping. The latex tube is held by a forceps before insertion into the anorectum. The lower end of the tube is reinforced by a collar made of fabric to prevent the suture from cutting through the latex.

tubobowel anastomosis to grasp the upper part of the tube (Fig. 4), which is everted through the anastomosis to the exterior. The tube, shortened according to preference, is now in a position to be attached to a receptacle (Fig. 5).

RESULTS

In all cases, the tube functioned satisfactorily and achieved the objective of preventing fecal contamination of the wound. Tubes remained in place for 10 to

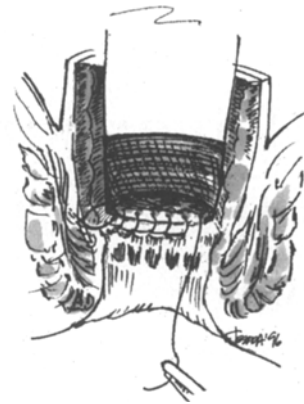


Figure 3. A running interlocking suture, the long end of a stay suture, is seen uniting half the circumference of the tube collar and the submucosa of the anorectum. It will be tied to a similar suture of the other half of the circumference.

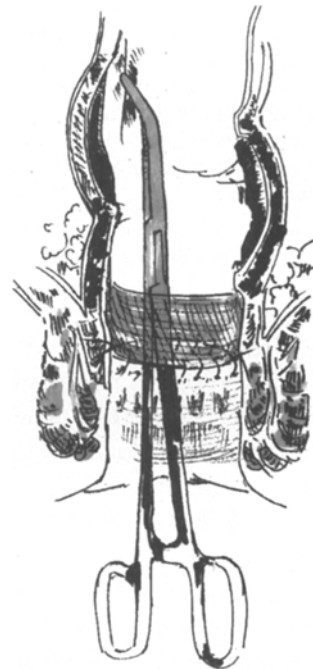


Figure 4. An instrument is seen passing through the completed tubobowel anastomosis and grasping the latex tube before its eversion through the anal orifice.

14 (mean, 12) days before being passed spontaneously. Before passage of the tube, definitive procedures were performed in five cases, three muscle transposition procedures and two skin grafts. In the other three patients, further operative procedures were unnecessary. One patient had the tube placed a second time, one week after the first tube passed. Some patients initially complained of tenesmus-like symptoms, but these disappeared after the first day.

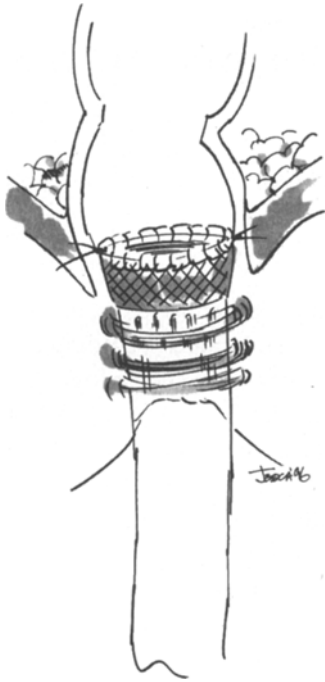


Figure 5. The final position of the tube as it lies in the anorectum before being fitted to a receptacle.

There were no complications. Rectal examinations one month later revealed no abnormalities.

DISCUSSION

There are no satisfactory means of controlling the fecal stream under the circumstances described above. Medical measures such as constipating the patient are seldom successful and may lead to fecal impaction, especially in the elderly. Controlling the diet may be counterproductive because these patients require good nutrition to aid the healing process. Parenteral feeding has disadvantages that are well known.

Local measures are disappointing because it is difficult to keep incontinence bags in place for any length of time, and the seal to the anus is seldom complete or maintained. Rectal tubes are likewise of little value; they block, dislodge, are difficult to maintain, and allow stool to pass alongside.

The most successful method of diverting the stream

is by a colostomy, and this is commonly recommended.¹ Disadvantages of this procedure are well known. In some patients excessive obesity would have rendered the operation of colostomy of the pelvic colon difficult if not impossible. Transverse colostomy is easier but has its own set of problems.

In using the alternative method suggested, certain pitfalls need to be avoided. The colon should be cleared as much as possible because large, hard stool is able to block the tube just as it can block the normal colorectum. Chromic catgut sutures should be avoided because it has been shown that the sutures lead to early separation of the tube.² Sutures must, at least, pass to the submucosal layer of the bowel wall because anything superficial to this layer also leads to early passage of the tube. Size of the tube should be tailored to the size of the dilated anorectum. It is suggested that consideration be given to use of this simple technique of obtaining temporary diversion of the fecal stream without any apparent complications.

SUMMARY

Large infected and/or necrotic perianal lesions that encroach on the anal verge are difficult to manage because of constant contamination by the fecal stream, which often exacerbates the situation. Present medical methods of controlling the fecal stream are unsatisfactory, whereas surgical methods such as the performance of a colostomy have well known disadvantages. A simple method of controlling fecal contamination that does not appear to present any disadvantages is presented.

ACKNOWLEDGMENT

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