Closed Rectopexy With Transanal Resection for Complete Rectal Prolapse in Adults

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Many techniques have been described for repair of complete rectal prolapse in adults. The results of abdominal approaches are superior to those of perineal approaches, but they carry the risks of major abdominal surgery. Twenty-seven patients (15 females and 12 males) were included in this study, with a mean age of 46 years. Nine of these patients had fecal incontinence. The operation can be performed under spinal or general anesthesia. The operation involves transanal resection of the redundant part of the rectum followed by rectopexy through small postanal incisions. The mean follow-up period was 24 months. One patient developed infection in one stab incision 6 months after the operation. Two patients had hematoma formation, which were managed conservatively. During the 2-year period of follow-up, no recurrence was observed in any of our patients. Fecal incontinence improved in the nine incontinent patients. The technique is simple, easy, and less invasive with good results and less morbidity and is not associated with serious complications. (J GASTROINTEST SURG 2005;9:980–984)

KEY WORDS: Closed, rectopexy, adult, rectal prolapse

Rectal prolapse (RP), a distressing condition in which part or all of the layers of the rectum are extruded through the anal sphincter, usually occurs at the extreme ends of age, particularly in elderly women and infants. The causes of RP are not clearly understood, and the best method of management is debated.[1] There is controversy as whether RP is due to a sliding hernia, an intussusception, or a combination of the two.[2] Many surgical techniques for treatment of RP have been described but none have been shown to be ideal. The procedure chosen is usually based on the fitness of the patient and the surgeon's familiarity and preference for a particular surgical approach.[3] This report describes a new technique that has the simplicity of a perianal approach and the good results of an abdominal approach.

PATIENTS AND METHODS

The study included 27 patients (15 females and 12 males) with complete RP for a period ranging from 9 to 21 months. The mean age was 46 years (range, 33–57 years). Nine patients had fecal incontinence. The RP involved a full-thickness, circumferential RP, and the shortest length of prolapse was 5 cm. The initial management included assessment and correction of the predisposing factors. Systemic antibiotics and intestinal antiseptics were given orally 24 hours preoperatively. Anorectal preparation was done by repeated enema the night before operation.

TECHNIQUE

With the patient under spinal or general anesthesia and in lithotomy position, the submucosa above the dentate line is injected with a dilute epinephrine solution 1:200,000. This maneuver aids in identifying the dissection plane and makes the field bloodless. The mucosa 1 cm above the dentate line is incised circumferentially and then dissected from the underlying muscle for the length of the part of the rectum that passes through the pelvic floor muscles (about the lower half of the rectum). Then, the dissection beyond this level is deeper, excising the full thickness of the rectal wall. The dissection is complete when the rectal

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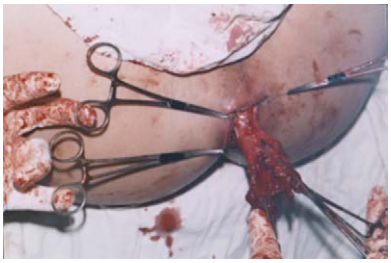

Fig. 1. Dissection of redundant rectal mucosa and plication of rectal muscle were completed.

mucosa cannot be pulled down any farther (Fig. 1). The redundant rectal muscle is then vertically plicated by two rows of sutures, one at the right side and the other at the left side, by using polypropylene No. 0 in continuous manner, starting at the apex of the dissection and continuing down to the distal cut edge of mucosa in the anal canal. As they are tied, the muscle is plicated. The excess mucosa is then excised, and anastomosis of distal mucosa to proximal mucosa is performed by using absorbable suture. After that, three postanal small stab incisions are made at 9, 3, and 6 o'clock positions about 0.5 cm in length and 1.5 cm in depth. The top hole needle is a lazy S-shape needle of 25–30 cm in length with a very pointed tip and a lateral hole immediately behind the tip, as designed for this procedure. This needle has a handle at its proximal end, which is used to direct it (Fig. 2). The top hole needle tip is introduced through one

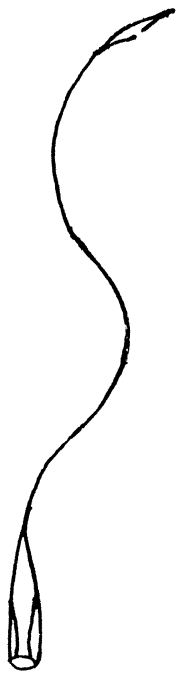

Fig. 2. Top hole needle.

end of the stab incision into the presacral fascia following the sacral curvature with a guiding finger through the anus high as possible. The needle handle is directed backward to penetrate the colonic wall (Fig. 3, *A*) at the apex of the previous dissection by the needle tip and the needle hole appears from inside the rectum. One end of nonabsorbable monofilament thread (polypropylene No. 1) is threaded through the hole of the needle, and the needle is withdrawn to bring the end of the thread through the stab incision (Fig. 3, *B*). This suture end is then detached from the needle. The needle tip is introduced again through another end of the same stab incision but this time passes into the plicated muscle of the rectum and is directed aborad up through the colonic wall before penetrating into the lumen at the same level as the previous step. Then, the needle tip appears from inside the colon at the same opening through which the thread appears (Fig. 3, *C*). The other suture end is threaded through the needle hole, and then the needle is withdrawn again to bring the other suture end through from the same stab incision. The two strands of the suture are tied subcutaneously through the stab incision thereby serving to fix and stabilize the rectal muscle.[4] Three inverted U-shaped nonabsorbable monofilament sutures are used to produce good fixation (Figs. 4, 5). The inverted U-shaped sutures at the 9 and 3 o'clock positions entrap the plication sutures, which had been placed previously in the redundant muscles. A third inverted U-shaped suture was placed at the 6 o'clock position. The stab incisions were left open for drainage and not closed with any stitches. The systemic antibiotics and intestinal antiseptics were continued for 7 days after operation. The follow-up period was ranged from 12 to 36 months (mean period, 24 months) for recurrence, incontinence, and special complications.

RESULTS

The mean time of the operation by this technique was 45 minutes (30 minutes for transanal resection and 15 minutes for closed rectopexy). Two patients developed a pararectal hematoma, which was treated conservatively. There has been no recurrence during the period of follow-up. Rectal examination confirmed that the stab incisions and sphincteric tone had healed well in about 3 weeks. One patient developed perianal suppuration at the site of one stab incision after 6 months of the operation, which was drained and healed after two weeks without other complications. There have been no complaints of constipation or stenosis on rectal examination in this group of patients treated by this technique.