

Technical Note

Local Repair for a Loop Colostomy Prolapse Using a Linear Stapling Device

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Stoma prolapse is a common late complication following loop transverse colostomy. Various procedures were reported to correct prolapse, but major surgery often was needed. We herein describe a safe and simple method to revise the prolapse stoma by using linear staplers.

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Key Words

Stoma prolapse;

Linear staple

Construction of transverse loop colostomy is a common procedure for either to relieve colonic obstruction or to protect an anastomosis; it can also be constructed to manage colonic stricture or divert a rectovaginal fistula. Stoma prolapse aside from parastomal hernia is a common complication for loop colostomy, and the reported incidence rate is 7-25%.¹ Conservative procedures are temporarily efficacious, but surgical correction is frequently required when mucosal bleeding and incarceration developed. Laparotomy with resection of the prolapse and conversion to an end loop colostomy was often carried out for correction of stoma prolapse. We herein describe a safe and simple technique to manage this troublesome condition.

Case Report

A 71-year-old female underwent chemo-radiate therapy for cervical carcinoma 35 years ago. Recur-

rent urinary tract infection occurred in the past and fecal discharge from her vagina lately noted. Barium enema study revealed a high-type rectovaginal fistula which was not emendable. Therefore a transverse loop colostomy was constructed at middle upper abdomen for alleviation of her vaginal fecal discharge. She presented with stoma prolapse at emergency room one month later. Her colostomy protruded approximately 15 cm, and it was markedly swelling, and superficial mucosal erosion but no strangulation detected (Fig. 1). Manually reduction is prohibited even after hygroscopic agents using. Due to worsening of pain from the prolapse stoma, revision was advised and accepted. The stoma prolapse was restructured with using linear stapling devices. The procedure was completed within 30 minutes. Oral intake started on the same evening, and stool passage was noted from stoma on the first postoperative day. On the second day, she was then discharged and no recurrent prolapse at 6 months later follow up and the patient was

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satisfied the minor operation.

Operative Technique

The operation was performed under intravenous general anesthesia. A vertical incision was made 1-2 cm in size, approximately 2 cm above the skin at the



Fig. 1. The transverse loop colostomy protruded approximately 15 cm from the skin.



Fig. 2. Two small incisions 1-2 cm in size were made at cephalic and caudal side.

caudal side of the proximal prolapse segment, and another one at opposite side (Fig. 2). With both the inner and outer walls of the stoma incised to allow the device (linear cutter TCR 55, Ethicon, USA) access. The linear stapler was applied through the two openings, and the lateral aspect of prolapse colon was divided after fired (Fig. 3). Then, the medial aspect was divided with the same device, and the prolapse colon was transected. Complete hemostasis was made with intermittent full-thickness 3-0 chromic sutures.

The residual stoma remained in good blood supply after operation (Fig. 4). Total operative times were less than 30 minutes, and blood loss was minimal. The stoma became mild retracted just after the procedure; it was everted again after 12 days later and enabled good appliance pouching (Fig. 5). The summary of technique is illustrated in Fig. 6.

Discussion

Stoma prolapse is usually not an emergent prob-



Fig. 3. A GIA 55 was introduced through the two openings, and divided lateral aspect with firing the device. The medial aspect was divided with another GIA 55 and the prolapse segment was transected.

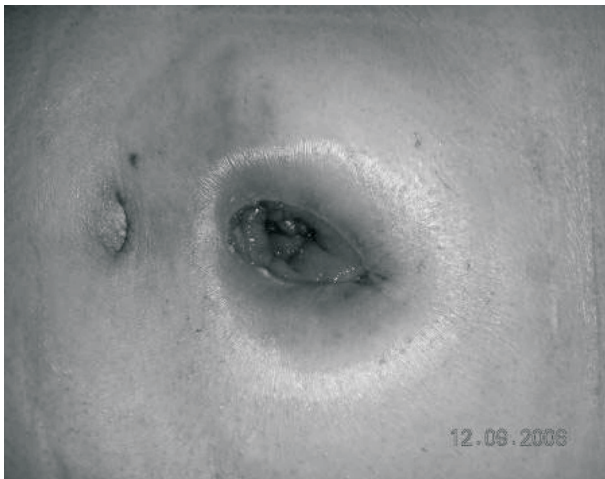


Fig. 4. The residual stoma was mild retracted and good blood supply.

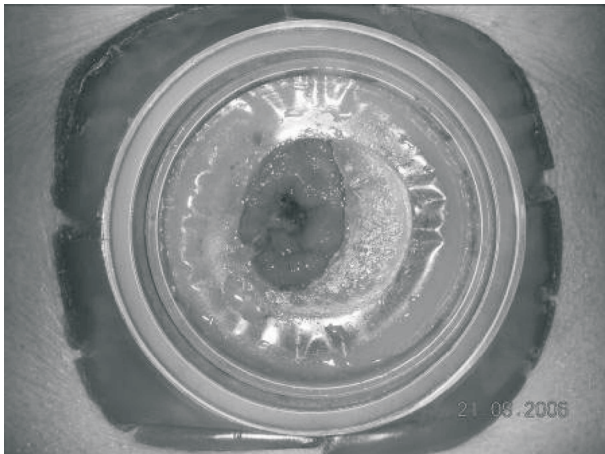


Fig. 5. The stoma became being everted postoperative 12 days later.

lem, and can be manual reduced. The prolapse may cause severe itching, stool leakage, poor cosmetic view and troublesome pouching. In cases of temporal colostomies, many surgeons usually manage conservatively until the stoma closure. For permanent stomies, usually some form of corrective procedures is reached. Various methods were described to correct the stoma prolapse.^{2,3} Typically osmotic agents using is a good option for acute irreducible stoma prolapse, but it's not a definitive treatment.² Surgical resection of a redundant stoma and conversion of a loop colostomy to an end-loop stoma is very effective in cure. Laparotomy and extensive dissection were required for surgical resection. General anesthesia is required

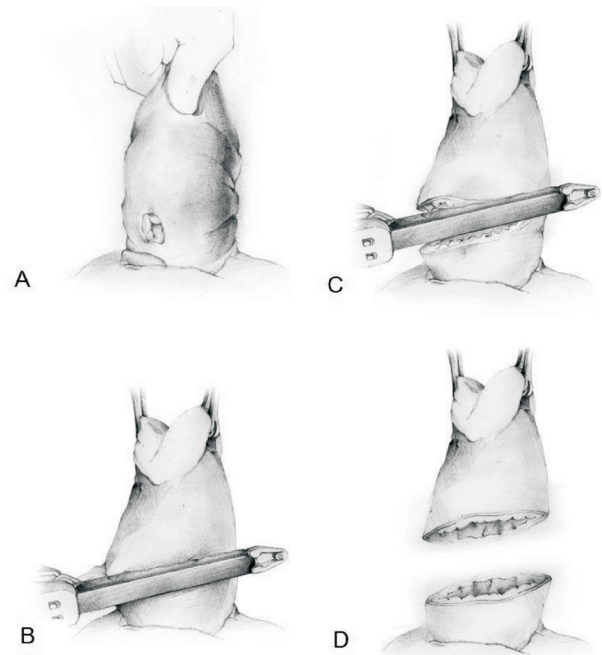


Fig. 6. The summary of technique. A. Two small incisions 1-2 cm in size were made at cephalic and caudal side. B. A GIA 55 was introduced through the two openings, and divided lateral aspect with firing the device. C-D. The medial aspect was divided with another GIA 55 and the prolapse segment was transected.

and prolapsed hospitalization days may be required. Button-pxy fixation is another efficacious method, but the recurrent rate is high in large prolapse stoma.³

Maeda and coworkers published a simple method to perform local correction of a transverse loop colostomy prolapse. They used GIA to perform circular resection of the prolapse stoma with two horizontal staplings.⁴ Tepetes et al reported another local correction method with a linear stapler; vertical division of the prolapsed limb with GIA was carried out, and another horizontal resection of bowel flap was performed to achieve complete resection.⁵ Fumitake Hata et al showed excellent result with using a linear stapler to correct the stoma plapse.⁶

In the original Maeda method, only one opening was to apply a GIA. We modified his technique and made two openings to enable introduce GIA in a through and through method. Our patient was admitted on day longer because of our concern of the "supply devascularized distal cuff" which did not happened and she was discharged on the postoperative second-

ary day. The quick recover post-operative course was also presented in other studies.^{4,5,6}

Local repair of a stoma prolapse by a stapling device needs more cost for the stapler, but it has less blood loss, shorter operative time, less hospitalization days and quicker recovery to normal life than the convention procedure. In addition, it was simple to perform.

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技術摘要

線形縫合器治療環狀大腸造口脫垂

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造口脫垂是環狀大腸造口常見的晚期併發症。臨床上有各種不同的矯正方式,但通常須要手術治療。在此我們提供一個有效而簡易的手術方式,用線形縫合器來治療環狀大腸造口脫垂。

關鍵詞 造口脫垂、線形縫合器。