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Stomoplasty with panniculectomy in an obese patient with stomal retraction: A case report



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ABSTRACT

INTRODUCTION: Stomal retraction is a common complication following stoma formation. A repeat surgical procedure for stomal revision is an invasive treatment that is often required as a result.

CASE PRESENTATION: An 81-year-old woman with obstructive rectal carcinoma and perforative peritonitis underwent an emergent anterior resection and colostomy (Hartmann's operation). After the operation, the patient changed the stoma pouch every day because of stomal retraction and leakage. Thirty-eight days after the operation, we performed a stomoplasty with panniculectomy. Following this procedure, the patient changed the stoma pouch twice weekly.

DISCUSSION: Stomal retraction is caused by the thick subcutaneous fat and abnormal skin folds in obese patients, as well as the excess tension that is the result of inadequate mobilization. Treatment of stomal retraction typically requires an intraperitoneal stoma revision. Our method of panniculectomy with skin excision but without stomal revision does not involve an incision around the stoma and there is no risk of fecal contamination.

CONCLUSION: We report a case of an obese patient who underwent stomoplasty with panniculectomy for stomal retraction. We believe that stomoplasty with panniculectomy is a feasible option in obese patients with stomal retraction.

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1. Introduction

Stomal retraction is a common complication following stoma formation [1–3]. As a result, a repeat surgical procedure for stomal revision is an invasive treatment that is often required [4]. Herein, we report a case of stomoplasty with panniculectomy in an obese patient with stomal retraction.

2. Case presentation

An 81-year-old woman presented at our department with sudden abdominal pain and fever. She had diabetes mellitus and

hypertension, and her body mass index (BMI) was 31. Enhanced computed tomography (CT) imaging showed the dirty mass sign around the dilated sigmoid colon and rectal wall thickness, which suggested obstructive rectal carcinoma and perforative peritonitis with sigmoid diverticulum. An emergent anterior resection and colostomy (Hartmann's operation) with irrigation and drainage was performed. Because the wall of descending colon was swollen and ischemic, we resected the descending and splenic flexure. However the transverse colon was short, we created transverse colostomy and fixed to the rectal sheath. Pathological examination revealed moderate differentiated adenocarcinoma with negative lymph node metastasis.

After the operation, the patient changed the stoma pouch every day because of stomal retraction and leakage (Figs. 1 and 2). Thirty-eight days after the operation, we performed a stomoplasty with panniculectomy. Before the stomoplasty, we marked the skin incisional line in the sitting position that uncovers skin folds and excrescent subcutaneous fat (Fig. 3a). A flap of skin and subcutaneous fat was excised en bloc above the anterior rectus sheath (Fig. 3b). To arrange the shape of the flap, we cut the fascia side of the subcutaneous fat (Figs. 3c 4). The flap was anchored to

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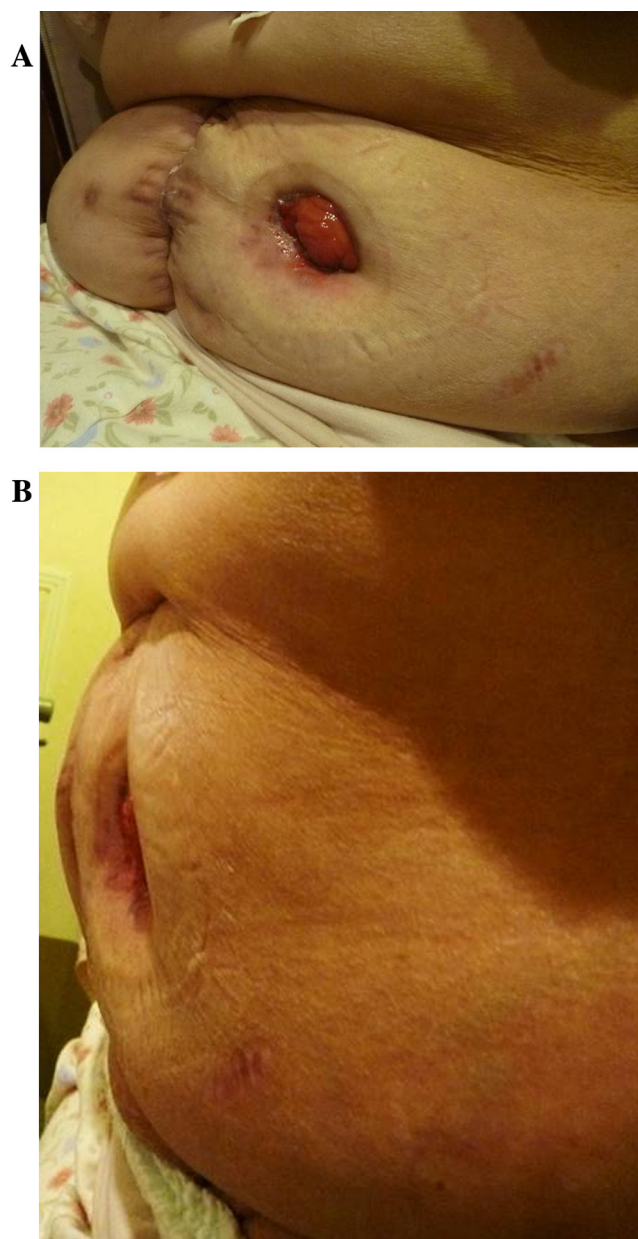


Fig. 1. Photograph of preoperative stoma (stomal retraction).

the fascia with 3-0 absorbable thread. A drain was placed in the subcutaneous space. The flap was sutured in two layers using 3-0 absorbable thread and 5-0 non-absorbable fiber (Fig. 3d). After the stomaplasty, the patient changed the stoma pouch twice weekly (Fig. 5).

3. Discussion

Stoma complications include poor siting, parastomal hernia, prolapse, retraction, ischemia/necrosis, peristomal dermatologic problems, mucocutaneous separation, and pyoderma gangrenosum; the reported incidence rate is 10–70% [1–3]. Stomal retraction is defined as a stoma that is 5 mm or more below the skin surface, and the reported incidence rate is 1.4–24% [1,2,5,6]. Stomal retraction and excrescent skin folds result in poor fitting, frequent leakage, and peristomal dermatologic problems [4,7,8]. Stomal retraction is caused by the thick subcutaneous fat and abnormal skin folds in obese patients, as well as by the excess tension that

is the result of inadequate mobilization [2–4,7]. Although the rectus sling method of colostomy with double orifices was reported to be a preventive approach, our case had a colostomy with a single orifice so we were unable to utilize this method [9].

Treatment of stomal retraction typically requires an intraperitoneal stoma revision, which is invasive [2]. Although Samdal et al. reported peristomal liposuction as a treatment method, it cannot solve the problem of excrescent skin [8]. Katkooori et al. reported on panniculectomy with stomal revision and skin excision for stomal retraction [4]. However, in this method, the incision around the stomal orifice is thought to introduce a risk of stomal infection [4]. Because this patient had diabetes mellitus and suffered surgical site infection at midline laparotomy, we chose stomaplasty without skin incision around colostomy. Our method of panniculectomy with skin excision but without stomal revision does not involve an incision around the stoma and there is no risk of fecal contamination.

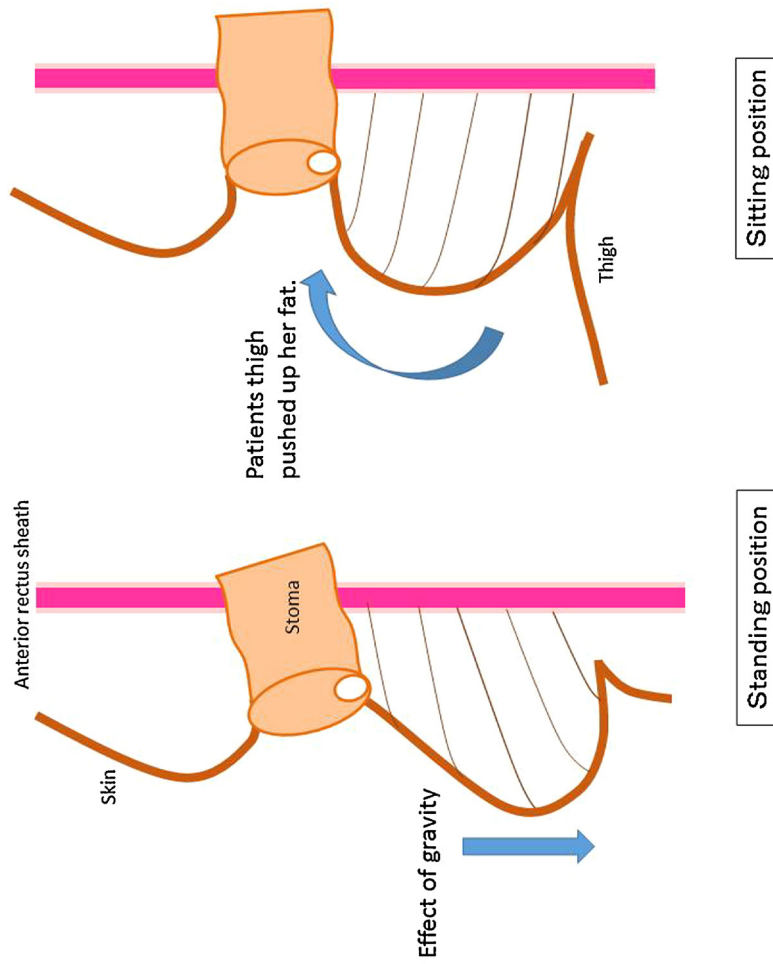


Fig. 2. Schema of the preoperative findings: the movement of lower abdominal fat tissue.

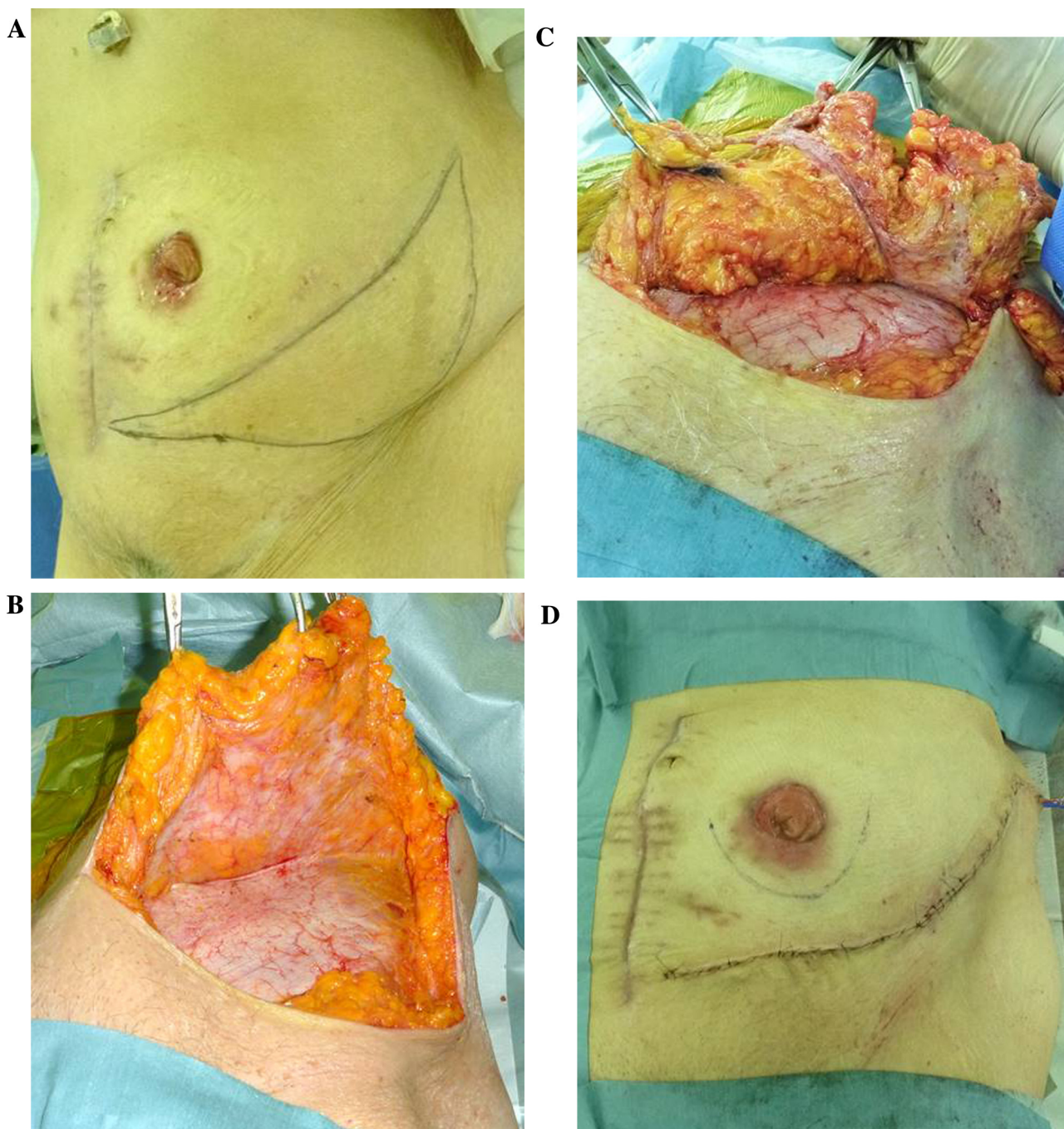


Fig. 3. Photograph of the operative field.

4. Conclusion

We report a case of an obese patient who underwent a stomaplasty with panniculectomy and stomal retraction. We believe that stomaplasty with panniculectomy is a feasible option in obese patients with stomal retraction.

Conflict of interests

The authors declare no conflict of interests for this article.

Funding

None.

Ethical approval

Written informed consent was obtained from the patients for publication of these case reports and accompanying images.

Consent

This patient was properly informed and gave consent for her clinical information to be included in an Elsevier publication.

Authors contribution

Eisaku Ito performed the procedure, wrote the manuscript, and is responsible for the information. Masaaki Kosaka, Chie

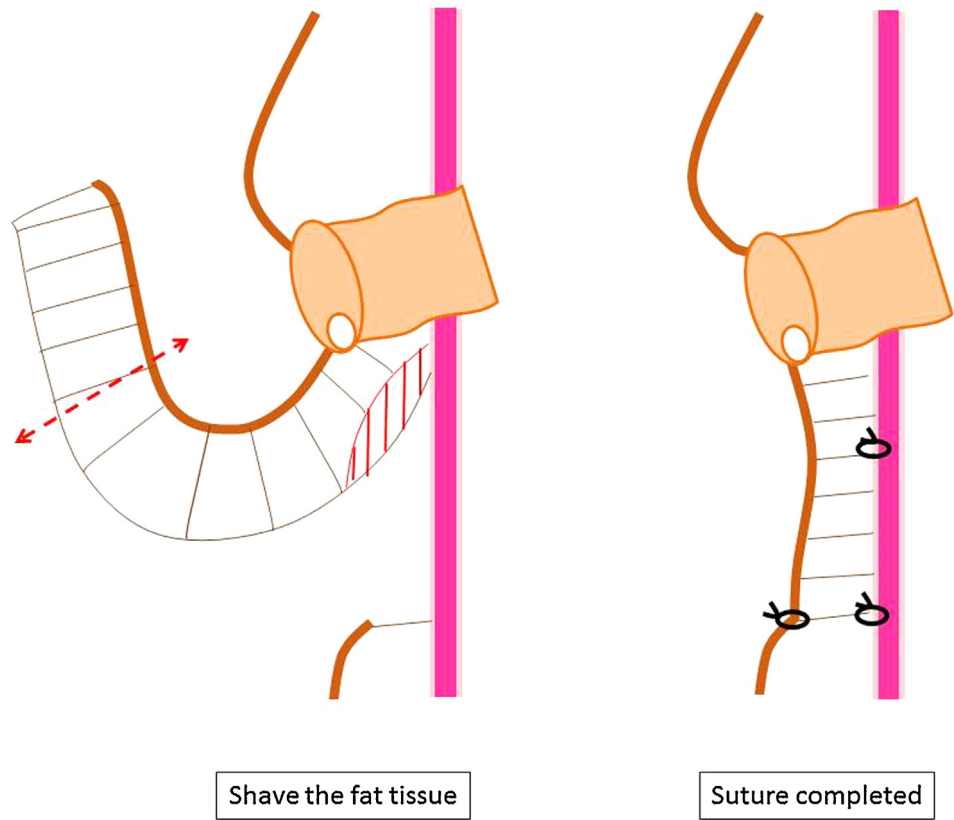


Fig. 4. Schema of the operative findings: note the newly formed tight fascial connection with abdominal wall.



Fig. 5. Photograph of stoma after the stomaplasty.

Kawaguchi, Keigo Nakashima, Norihiko Suzuki, and Tomonori Imakita performed the procedure. Nobuhiro Tsutsui, Hironori Ohdaira, Masashi Yoshida, Masaki Kitajima, and Yutaka Suzuki critically reviewed the manuscript.

Guarantor

Eisaku Ito and Yutaka Suzuki are the guarantor of this paper.

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