Stomal Revision Using Abdominal Wall Contouring

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A number of complications or problems can develop in ileostomies and colostomies, many of which can be managed with the assistance of an enterostomal therapy nurse (1). Others may require an operative approach. The patient described in this article required a major operative procedure that has been described as abdominal wall contouring to resolve difficulties with her ileostomy. Fortunately, few patients will require procedures of this magnitude, but it is available at specialized centers like Ochsner for those who do.

CASE PRESENTATION

A 55-year-old woman was diagnosed with Crohn's disease in 1974 (at age 24). She was treated with medication, but in 1978 required a total abdominal colectomy and an end ileostomy. Her rectum was left alone and the proximal end was closed as a Hartman's pouch. Her medical conditions included diabetes, high blood pressure, and morbid obesity (her weight exceeded 350 lbs.). She did well for several years after this operation. However, in 1993, she developed pyoderma grangrenosum of her lower legs. This is a rapidly developing, chronic, debilitating skin disease with irregular ulcers with necrotic bases (Fig.1). The exact cause of pyoderma is not known, but it is usually associated with a systemic disease like inflammatory bowel disease (Crohn's or ulcerative colitis). The disease is usually associated with active disease in the bowel (in this patient, her diseased rectum) and often responds to steroids. The patient was placed on steroids but her skin disease did not improve. She therefore underwent removal of her rectum. After removal of the diseased rectum, her pyoderma healed.

Over the next 11 years, the patient experienced major weight losses and gains that resulted in her abdominal wall developing very redundant folds of

Figure 1. Pyodermia grangrenosum of the lower extremities.

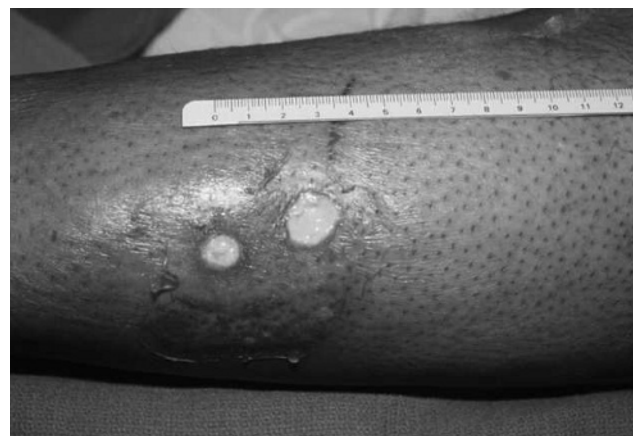

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Figure 2. Redundant abdominal wall folds of skin associated with ileostomy retraction. A. Frontal view. B. Sagittal section.

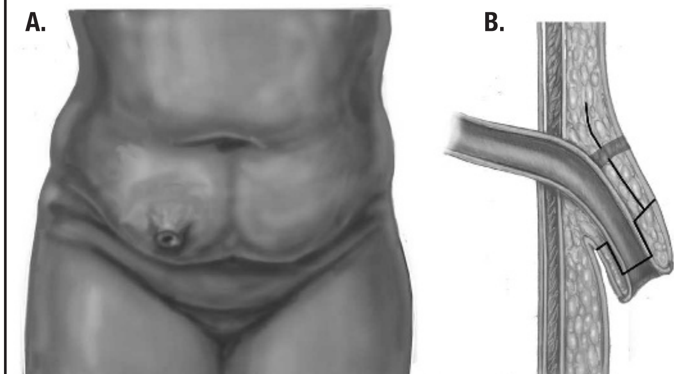
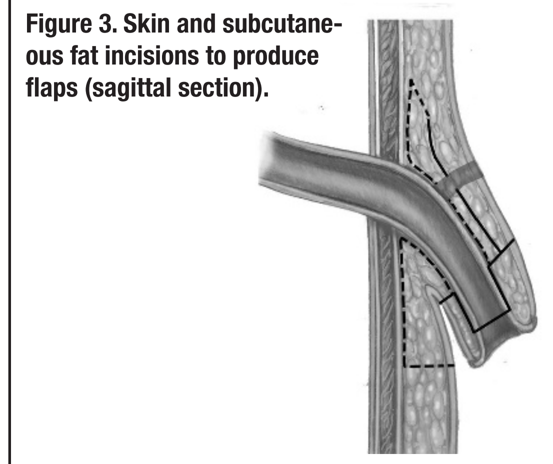


Figure 3. Skin and subcutaneous fat incisions to produce flaps (sagittal section).



abdominal skin (Fig. 2A, 2B). This produced retraction of her ileostomy and made it impossible for her to maintain an appliance seal for longer than 24 to 36 hours. Multiple types of appliances were tried without improvement.

A solution to improve this patient's ileostomy was to perform abdominal wall contouring (2). This is a major operative procedure to excise excessive abdominal wall tissue and reconstruct the abdominal wall. Often, this can be done without entering the abdominal cavity, so it is well tolerated. As shown in Figure 3, the excess abdominal wall tissue (including that containing the stoma) is excised, and excess subcutaneous fat is removed to create skin flaps (Fig. 4A, 4B). The ileum is brought through the upper flap, and the skin and subcutaneous tissue are put back together (Fig. 5A, 5B). These large wounds have a significant potential for developing a postoperative wound infection, as occurred in this patient. The infection healed with antibiotics and wound care. After her wounds healed, the patient had a well-formed stoma and could wear her ileostomy appliance for 5–6 days.

Obviously, significant weight changes (gain or loss) can affect the abdominal wall and associated stomas. Diet and calorie control will prevent or manage many of these problems. When this is insufficient, or when disease processes or body characteristics necessitate further intervention, a stomal relocation or abdominal contouring may be the patient's best option. Centers that specialize in the management of patients with stomas can offer a full range of options.

Figure 4. Excess skin and subcutaneous fat excised. A. Frontal view. B. Sagittal section.

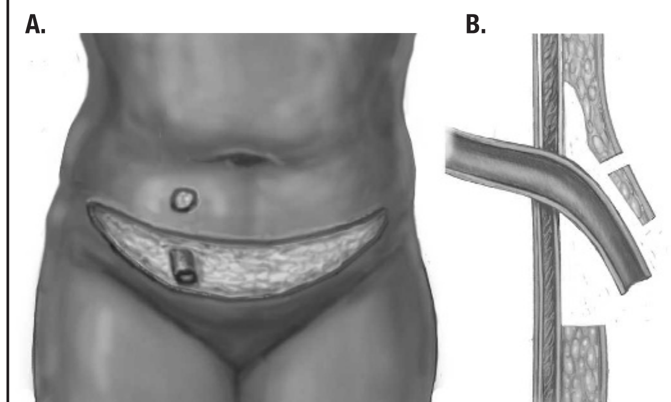
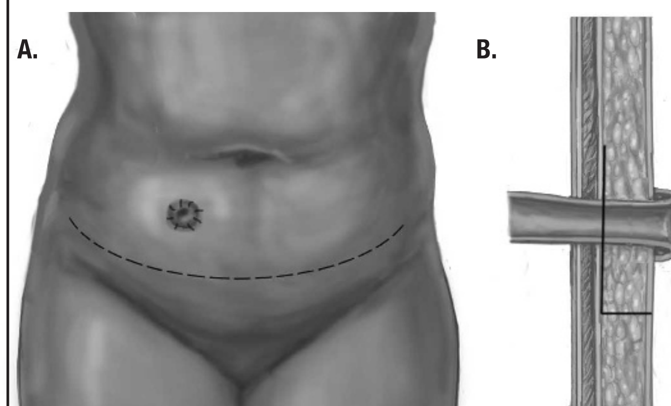


Figure 5. Ileostomy relocated through upper flap and skin incisions closed. A. Frontal view. B. Sagittal section.



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