

Laparoscopic Colostomy Reversal Utilizing a Next Generation Decellularized Dermal Allograft

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Surgical Summary

Presentation / Preoperative Diagnosis:

- 31 year-old male, history of an end colostomy after perforated diverticulitis
- Tobacco abuse, obesity, previous ventral hernia repair

Procedure:

- Laparoscopic colostomy reversal
- Partial colectomy

Postoperative Diagnosis:

- Extensive intra-abdominal adhesions
- Parastomal hernia
- Status post laparoscopic colostomy reversal, partial colectomy, extensive lysis of adhesions and reinforcement of the anterior rectal sheath with DermaPure[®]

Intra-Operative Implantation of DermaPure[®]:

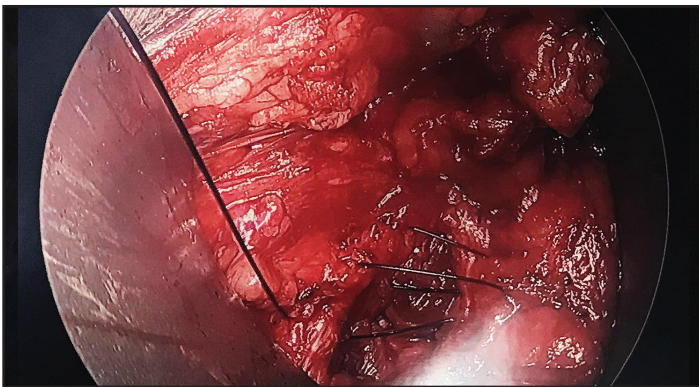


Figure 1. Suture repair of fascial defect after colostomy takedown

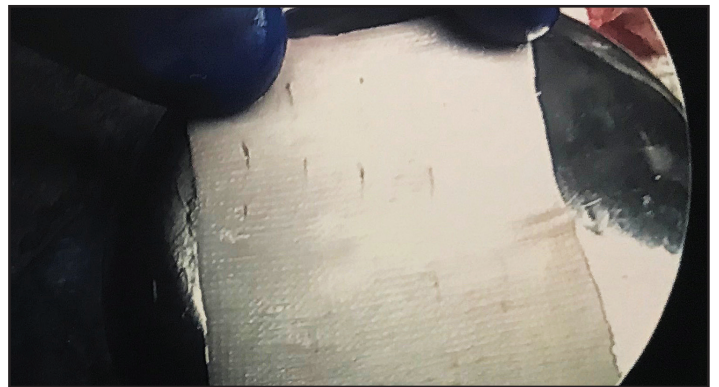


Figure 2. Pie-crusting (fenestration) of DermaPure[®] 4x6 to prevent post-operative seroma

Surgeon Perspective:

“The prophylactic use of DermaPure[®] to support the colostomy site fascial repair, has allowed a high-risk patient to have a positive surgical outcome and decrease the risk of complication”.

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Figure 3. DermaPure[®] reinforced anterior rectal sheath, overlay fashion

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Case Report

Assessment:

- Colostomy post diverticulitis with elevated risk of post-operative hernia at colostomy site

Intraoperative Findings:

- Moderate sized parastomal hernia
- Extensive intra-abdominal adhesions involving the abdomen and pelvis
- Long colorectal stump with residual diverticulosis
- Contamination secondary to presence of colostomy

Surgical Treatment:

- The end colostomy was closed and dissected free from the abdominal wall and reduced intracorporeally. The parastomal hernia sac was excised during the takedown.
- Intra-abdominal adhesions were lysed, the distal colon and rectum mobilized and partially resected laparoscopically. Using a 33 mm end to end anastomosis stapler, a transanal anastomosis was performed.
- The colostomy site was closed in a layered fashion with a running suture to repair and close fascial defect (Fig. 1).
- A 4 x 6 cm sheet of DermaPure[®] was prepared for implantation by fenestrating with a #15 scalpel (Fig. 2).
- The anterior rectal sheath was reinforced with DermaPure[®] placed in an overlay fashion (Fig.3), which was then reinforced with Scarpa's fascia. The colostomy site was puckered with a dermal purse-string suture.

Outcome / Conclusion:

- Three month follow up with no post-operative complications or evidence of stoma site herniation
- Patient at full activity level at 4 weeks post-op
- All post op pain resolved
- Despite continued tobacco use, surgical incision healed without complication
- Released to follow up as needed