

Robotic Assisted Laparoscopic Repair of a Recurrent Incarcerated Hiatal Hernia with Soft Tissue Reinforcement Utilizing a Next Generation Decellularized Dermal Allograft

Suhail C Sharif MD
Surgical Oncology
Fort Worth, TX
Board Certified, American Board of Surgery

Surgical Summary

Clinical Presentation:

- A 71-year-old female referred with gastroesophageal reflux disease (GERD) and recurrent hiatal hernia.
- History of a hiatal hernia repair, Barrett's esophagus with high grade dysplasia, and severe acid reflux.
- Esophagogastroduodenoscopy (EGD) with biopsy performed by referring physician showed a five cm paraesophageal hernia, gastritis, and esophageal mucosal changes consistent with short-segment Barrett's esophagus.
- Decision made to proceed with diagnostic laparoscopy, robotic-assisted hiatal hernia repair with DermaPure[®] decellularized dermal allograft for soft tissue reinforcement.

Intraoperative Findings:

- A moderate to large complex recurrent hiatal hernia (Figure 1).

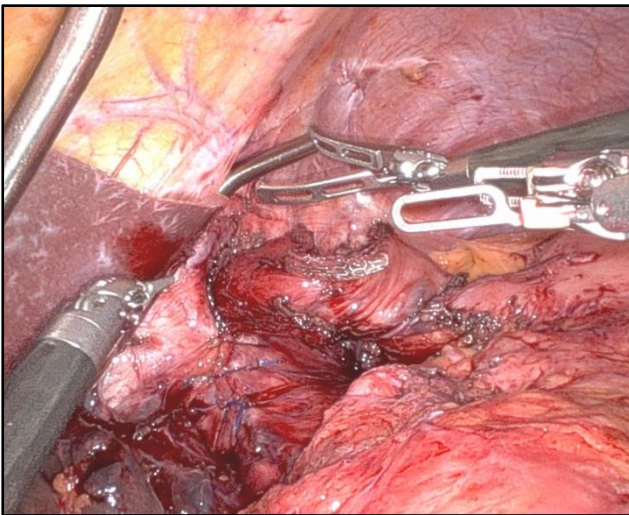


Figure 1. Moderate to large complex recurrent hiatal hernia.

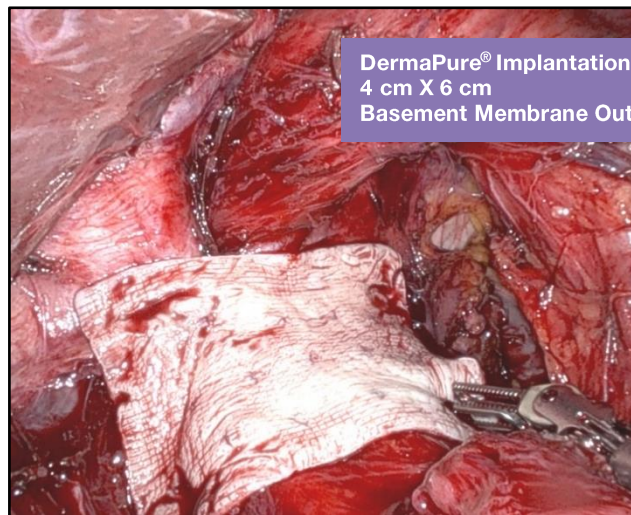


Figure 2. Placement of DermaPure[®] for soft tissue reinforcement.

Surgeon Perspective:

"Complex hiatal hernias, especially large paraesophageal hiatal hernias, have a very high recurrence rate. Studies have shown that the recurrence rate could be anywhere in the range from 12% to 42%¹. I elected to use DermaPure[®] biologic matrix as a reinforcement to my hiatal hernia repair to ameliorate the risk of recurrence in my patients."

1. Horgan S, Eubank TR, Jacobsen G, et al. Repair of paraesophageal hernias. Am J Surg. 1999;177:354-458

Robotic Assisted Laparoscopic Repair of a Recurrent Incarcerated Hiatal Hernia with Soft Tissue Reinforcement Utilizing a Next Generation Decellularized Dermal Allograft

Suhail C Sharif MD

Surgical Oncology

Fort Worth, TX

Board Certified, American Board of Surgery

DERMA [PURE]
dCELL technology

Surgical Procedure:

- The patient was placed in a supine position on the operating table. General anesthesia was administered, and the abdomen was prepped/draped in the usual sterile fashion. Received 2 grams intravenous (IV) Ancef for perioperative antibiotic coverage.
- A 5 mm incision was created in the left upper quadrant. Introduced a 5 mm Optiview® trocar under direct visualization utilizing a 5 mm 0-degree scope. The abdomen was insufflated to 15 mm/Hg using CO₂.
- General exploration of the abdominal cavity followed by placement of four da Vinci Xi® ports, one on the right and left upper quadrant, and one to the right and left of the umbilicus. An AirSeal® was placed just below the umbilicus. The patient was placed in Trendelenburg position at 18 degrees. The da Vinci Xi® was docked in standard fashion.
- A stab incision was created in the epigastrium. The left lateral segment of the liver was retracted using the Nathanson retractor. The undersurface of the left lateral segment of the liver was adhered to the stomach. A vessel sealer was used to come across the adhesions surrounding the undersurface of the liver.
- A previous Nissen wrap appeared to be adhered to the right and left crus of the diaphragm. Meticulously mobilized the Nissen wrap portion away from the right and left crus of the diaphragm, to gain access to the recurrent hiatal hernia. The Nissen wrap was incarcerated into the hiatus. It was reduced and unraveled to clearly identify and delineate the anatomy.
- Proceeded to ensure that the right and left crus were away from the gastroesophageal (GE) junction. The esophagus was immobilized with the gastroesophageal (GE) junction below the esophageal hiatus. The Nissen wrap portion of the stomach, in particular the gastric cardia area appeared atonic. Elected to perform a sleeve gastrectomy. Placed a 56 Fr bougie through the gastroesophageal (GE) junction into the stomach. Utilized the robotic stapler to perform a sleeve gastrectomy of the greater curvature of the stomach including the gastric cardia.
- Proceeded to repair the moderate to large esophageal hiatus (Figure 1) with 2-0 V-Loc® suture in a running interlocking manner. A 4 cm x 6 cm DermaPure® decellularized dermal allograft was placed for soft tissue reinforcement (Figure 2). VistaSeal® fibrin sealant was sprayed.
- Performed an esophagogastroduodenoscopy (EGD) to ensure prompt passage of the scope through the gastroesophageal (GE) junction into the stomach and ascertained that no leaks from the gastrectomy sleeve site were present. Identified one area of deserosalization of the stomach, repaired with 2-0 V-Loc® suture in a running interlocking manner. A 19 Fr Blake® drain was brought out from the left flank and secured to the skin with 2-0 Nylon suture.
- The abdomen was desufflated. The da Vinci Xi® was undocked. The incision was closed with 4-0 Monocryl® in a subcuticular manner.

Post-Operative Notes:

- Post-op upper gastrointestinal series (UGI) under fluoroscopy revealed no evidence of leak or obstruction.

TissueRegenixUS.com
833-567-0767

Optiview®, Monocryl®, Blake®, and VistaSeal® are registered trademarks of Ethicon, a Johnson & Johnson Company; Da Vinci Xi® is a registered trademark of Intuitive Surgical; AirSeal® is a registered trademark of SurgiQuest, Inc.; V-Loc® is a registered trademark of Covidien LP. DermaPure® is a registered trademark of Tissue Regenix Wound Care, Inc. dCELL® Technology is a registered trademark of Tissue Regenix Limited. TRX BioSurgery is a Tissue Regenix Group Company. TR080 rev01 240812

TRX BioSurgery