

Endoscopic bilateral component separation reinforced with TIGR® Matrix Surgical Mesh.

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History:

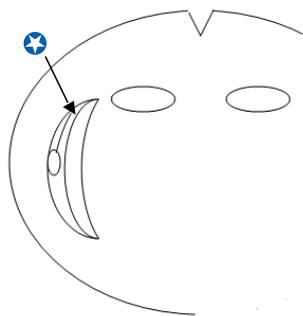
54 year old male who was hospitalized for necrotizing pancreatitis in 2009. He required a lengthy hospital stay that included multiple abdominal operations that resulted in an open abdomen which necessitated a skin graft over bowel. He presented a year later with a large ventral hernia defect and obvious skin graft deformity. He presented with abdominal pain associated with constipation, and had required chronic narcotic pain medication. His pertinent history includes 35 years of one

pack/day smoking history and also has a history of diabetes and hypertension. Abdominal exam revealed a 10 cm wide elliptical skin graft overlying small bowel. His rectus muscles were palpated approximately 10 cm apart. He was mildly tender on palpation. Medications included: Fentanyl, Oxycodone, Xanax, Soma, Ambien, Prednisone, Hydroxychloroquine and a Multivitamin.



Procedure:

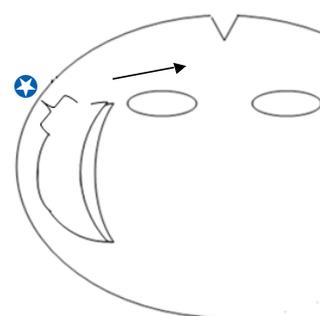
The operation included excision of the skin graft, repair of two serosal injuries to the small bowel and adhesions that were taken down bilaterally. Then, an endoscopic bilateral component separation was performed using balloon dissection then electrocautery with scissors to divide the external oblique fascia from the groin to above the costal margin. The component separation allowed for decreased tension and adequate approximation of the muscles in the midline. At this point the peritoneum was mobilized and closed with running suture. Two pieces of 10 x 15 cm TIGR® Matrix Surgical Mesh were placed in the preperitoneal space as a buttress. TIGR® Matrix Surgical Mesh was sutured with interrupted sutures to the posterior fascia. The rectus midline was closed with running suture. One Blake drain and an OnQ pain pump were placed in the midline. Midline and trocar incisions were closed with staples.



Incision in lateral abdomen wall - incision in external oblique fascia just lateral to lateral border of rectus muscle. This is the plane where balloon dissector is placed.



Balloon dissector separates external and internal oblique muscles.



- External oblique cut to allow rectus muscle to move medial.

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Post-operative course:

The patient's postoperative course was uneventful and he was discharged on postoperative day five.

He was seen in the office two weeks postoperative and had mild bruising but no evidence of wound infection, hernia recurrence or other complications. He complained of a small amount of abdominal pain.

He was seen again at six weeks postoperative and the bruising resolved, wound was healing well with no complications. At this point, he denied abdominal pain. He was able to get off his narcotic pain medications and was gradually returning to activities. He was also able to decrease his smoking to a half a pack/day and convinced he would be able to stop completely in the future.



Conclusion:

In this patient, TIGR® Matrix Surgical Mesh was placed in the peritoneal space as a buttress for soft tissue, as an alternative to permanent synthetic mesh which can require mesh removal in the setting of a postoperative wound infection.

Rarely, permanent synthetic mesh can contribute to chronic pain as well as hernia recurrence if there is significant contraction and/or migration. Biologic mesh can lead to hernia recurrence and has a high cost to the hospital.

In this patient they found that TIGR® Matrix Surgical Mesh performed well with excellent short-term outcomes in a complex patient with high risk of wound complications. This type of outcome is consistent long-term in their clinical quality improvement project, TIGR® Matrix Surgical Mesh could provide clinical benefits for the patient and significant value for the U.S. healthcare system.

Summary:

Value Proposition and How to Assess with Clinical Quality Improvement:

In an attempt to understand the value of TIGR® Matrix Surgical Mesh, in the complex abdominal wall patient, the team at Halifax Health is in the planning process of clinical quality improvement projects by defining processes of care and outcomes measures. Halifax Health will then be able to understand where TIGR® Matrix Surgical Mesh has value in specific patient populations.