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Weck®
EFx Shield®
Fascial Closure System

Case Study

Uniform Laparoscopic Port-Site Closure with a High-BMI Patient

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CASE PROFILE

Procedure:
Laparoscopic
Roux-En-Y Gastric Bypass
Patient BMI: 54.3
Patient weight: 192 kg

Challenge

Obesity is widely acknowledged as a risk factor for port-site hernia following laparoscopic surgery.[1] There is a general consensus in the literature that preventive measures should be taken to avoid the occurrence of incisional hernias by closing defects larger than 10 mm.[2] Challenges when closing fascia in high-BMI cases with a standard suture passer technique can include:

- Varying fascia purchase depending on different patient anatomies
- Impaired direct visualization of the fascia
- Thick abdominal walls induce loss of pneumoperitoneum
- Risk of bowel perforation
- Manipulation of the defect needed to close the fascia can lead to an increased defect size

In this case report, we will examine the potential application of the Weck EFx Shield Fascial Closure System with an obese patient during a laparoscopic Roux-En-Y gastric bypass.

Clinical History

44 year old male with a BMI of 54.3 presented with hypertension, type 2 diabetes, and sleep apnea. The patient was scheduled for a laparoscopic Roux-En-Y Gastric Bypass.

Procedure

The patient underwent laparoscopic surgery involving one 12 mm, two 10 mm and two 5 mm laparoscopic access ports. The surgeon decided to close the fascia of the 12 mm and one of the 10 mm ports using the Weck EFx Shield Fascial Closure System **(Figure 1)**.

A pre-loaded Weck EFx Shield device was inserted into the port-sites (10 mm and 12 mm, respectively) and its wings were deployed **(Figure 2)**. Per instructions, the wings were positioned flush against the abdominal wall and the suture retriever was inserted to capture the suture.

After collapsing the wings **(Figure 3)**, the device was removed from the defect and the closure was completed with standard suture tying techniques. The same technique was used for the second defect.

Figure 1
Weck EFx Shield Fascial Closure System

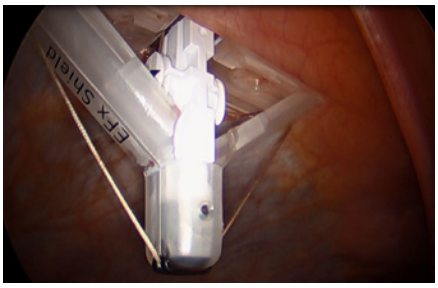

Figure 2
Deployment and suture retrieval

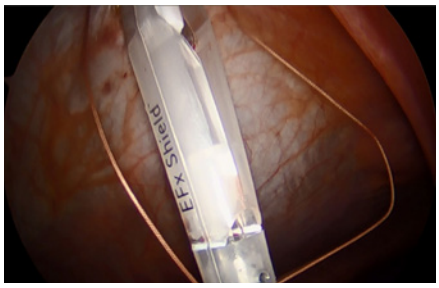

Figure 3
Collapsing and closing

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Both uses resulted in consistent suture positioning with equal suture purchase on each side, lateral to the mid-line of the defect. **(Figure 4)**. The patient was discharged on post-op day one without complications.

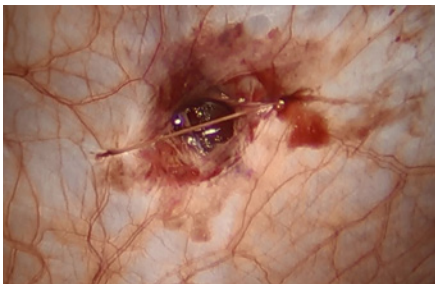

Figure 4
Stitch with consistent suture purchase

Follow Up

Upon follow-up no incisional bleeding, pain or other complications were noted. The patient indicated that he was not prescribed narcotic pain medication and discontinued non-narcotic pain medications through post-op day 5 and requested permission to return to work on post-op day 14.

Discussion

Loss of pneumoperitoneum and relatively thick abdominal walls are common challenges when closing defects of high-BMI patients. In this case, the shielded wings of the Weck® EFx Shield® Fascial Closure System provided protection from potential sharps injury that can often occur with standard suture passer techniques, preventing the suture retriever from perforating the viscera.

In this case, the EFx Shield System provided a fast method of closing the defect despite the thick abdominal wall. It was noted that the suture was placed at a satisfactory distance to the defects, thus providing an effective reapproximation of tissue and closure of the patient's port-sites.

Conclusion

In this reported case, **the Weck® EFx Shield® Fascial Closure System performed as intended and provided effective laparoscopic port-site closure** during a bariatric procedure on a high-BMI patient.

References:

1. Scozzari G, et al. High incidence of trocar site hernia after laparoscopic or robotic Roux-en-Y gastric bypass. Surg Endosc. 2014; 28(10): 2890-8.
2. Soroush A, et al. Assessing Effect of Fascial Non-Closure in 10 mm Trocar Sites on Incidence of Incisional Hernia. J Minim Invasive Surg Sci. 2012; 1(3): 99-10.

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