

# An island of muscular free flap-laparoscopic repair of recurrent incisional hernias presenting as left flank mass: a case report

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**Submitted**

April 18, 2022

**Accepted**

May 10, 2022

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**Citation:** Raza SS, Nathaniel E, Shah SAA, Hussain AK, Wasif JA, Awan SK, et al. An island of muscular free flap-laparoscopic repair of recurrent incisional hernias presenting as left flank mass: a case report. J Rehman Med Inst. 2022 Apr-Jun;8(2):23-5.

**ABSTRACT**

Incisional hernias present as ventral hernias but very rarely they may present as a recurrent hernia in the flank. We present the case of a 67-year-old male with past surgical history significant for open repair of recurrent ventral incisional hernia, previous component separation and surgical removal of infected mesh two years back; now presenting with a left lateral flank mass later confirmed as left lateral incisional hernia upon CT scan. The patient was planned for a laparoscopic incisional hernia repair with 20\*20 cm Ventralight mesh. At 3 months postoperative follow-up visit the patient was doing well and had returned to normal activity. There was no evidence of any recurrence.

**Keywords:** Anterior component separation, TAR, Laparoscopic surgery & Incisional Hernia.

*The authors declared no conflict of interest. All authors contributed substantially to the planning of research, data collection, data analysis, and write-up of the article, and agreed to be accountable for all aspects of the work.*

**INTRODUCTION**

A major complication of laparotomy is incisional hernias.<sup>1,2</sup> The cause of an incisional hernia includes abdominal surgery, COPD, pregnancy, ascites, constipation, malnutrition, jaundice, obesity, steroid use, urinary obstruction, or iatrogenic.<sup>3-5</sup> This may present as a recurrent ventral hernia or very rarely presents with a lateral flank mass. Due to the relative rarity and lack of published data, lateral incisional hernia remains a challenge for surgeons.<sup>6</sup>

**CASE REPORT**

A 67-year-old male presented to Department of Bariatric & Minimally Invasive Surgery, Cleveland Clinic Florida, Weston, Florida, USA, on 10<sup>th</sup> of February 2020, with a past medical history of hyperlipidemia, COPD, myocardial infarction, and past surgical history significant for open repair of 5<sup>th</sup> recurrence of incarcerated ventral incisional hernia with Alloderm. A previous component separation and surgical removal of infected mesh two years back was reported; also presented with a left lateral flank mass, a possible recurrent incisional hernia, six months back. The patient had no cardiac risk factors, no diabetes mellitus, no chronic kidney disease, or cardiac symptoms.

Apart from the large left lateral flank mass, which was reducible, non-tender and non-obstructing, rest of the physical exam was normal.

A CT Abdomen was ordered which showed an incisional hernia in the left flank (Figures 1a & 1b).



**Figure 1a:** CT Abdomen findings were consistent with the left flank Incisional Hernia in the transverse plane.



**Figure 1b:** CT Abdomen findings consistent with the left flank Incisional Hernia in coronal / sagittal plane.

Since the patient was symptomatic and the CT scan confirmed the diagnosis of left flank incisional hernia, the patient was planned for a laparoscopic incisional hernia repair with 20 \* 20 cm Ventralight mesh. A full Cardiology workup was done including Echo, Cardiac Cath, and other relevant investigations due to the history of heart disease. The patient was cleared for surgery.

Multiple adhesions with omentum were seen upon exploration of the abdominal cavity. After adhesiolysis, 12 mm trocar was inserted in the right upper quadrant. A 5 mm trocar was placed in the left mid-abdomen. The defect measured 11\*10 cm, was uncovered, and using 2-0 nonabsorbable quills suture. A 20\*20 cm Ventralight mesh was placed using 1-0 Prolene sutures making sure there was 1 cm of healthy fascia between each of the sutures.

The mesh was taut against the abdominal wall and appropriately placed. The mesh was tacked circumferentially using ProTack. Tisseel glue was applied to the inferior border of the mesh.

Trocars were removed. There was no evidence of bleeding. Wounds were irrigated and closed with a 4-0 monocryl subcuticular fashion. The patient was extubated and tolerated the procedure well. The surgery was uneventful, and the patient was discharged on the fourth postoperative day after he got stable.



**Figure 2:** shows the patient on the OR table with the lateral left flank incisional hernia.

At 3 months postoperative follow-up visit the patient was doing well and had returned to normal activity. There was no evidence of any recurrence. Upon physical exam, the patient was stable with no signs of hernia recurrence (Figure 3).



**Figure 3:** Postoperative picture at a recent follow-up.

## DISCUSSION

Despite several years of work, there has been a debate on how to treat the incisional hernia due to a high recurrence rate. The anterior/posterior compartment separation, transversus abdominis release and mesh reinforcement are the available possible options. Posterior component separation with transversus abdominis release successfully addresses recurrent ventral hernias following anterior component separation.<sup>7</sup>

In this case, treatment with laparoscopic incisional hernia repair significantly corrected the hernia and resolved the issue. One can hypothesize that laparoscopic repair may be a better alternative treatment. Although this is a single case report, it is demonstrated that the possible utility of laparoscopic repair in patients with recurrent incisional hernias presenting with a lateral abdominal mass provides a viable alternative to open abdominal laparotomies in patients who are a prohibitive risk for the indication, improves recovery time, is convenient and shows great results on follow up.<sup>8</sup>

Try not to focus on closing the midline all the time if not possible but never should the surgeon combine an anterior compartment separation with a posterior compartment separation at the same time which leads to all sorts of problems and recurrent hernias leaving an island of a muscular free flap having no attachments which predispose the patient to recurrent incisional hernias.<sup>9</sup>

## CONCLUSION

Laparoscopic repair corrected the hernia, and it can be said that laparoscopic repair may be a better alternative treatment; avoiding difficult midline closures and use of anterior compartment separation alongside posterior compartment separation at the same time will not predispose patients to recurrent hernias.

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