

Robotic Assisted Transversus Abdominus (TAR) to Repair Large Incisional Abd Wall Hernias: An Initial Experience



Edward Cho MD, Ziyad Nasrawi MD, Olivia Cheng MD, Justin Steele MD
NewYork-Presbyterian Brooklyn Methodist Hospital



Introduction

The goal of this study is to assess immediate and early post-operative outcomes following robotic assisted laparoscopic repair of large incisional hernias with transversus abdominus release (TAR). Until recently, most large incisional hernias were repaired by laparotomy with prolonged hospital stays (>4 days), and recurrence rates up to 27%. Laparoscopic repairs have been reported to have a shorter hospital stay, fewer post operative complications, less pain, and a much lower recurrence rate.

Methods

The operative records, post-operative course, and early follow up of 40 patients who underwent robotic assisted laparoscopic repair of large incisional hernias with TAR between January 2018 and August 2019 were reviewed.

Results

Forty patients (20 male, 20 female) with a mean age of 60.6 years, a BMI of 30.7, and an average ASA class of 2.45 underwent TAR repairs of large incisional hernias (on average 10x10cm) Thirty-one patients had primary repairs and 9 underwent recurrent repairs. In 17 patients, intra peritoneal dissection was necessary and in 23, the dissection was extraperitoneal. All operations were done by JS. The operative time ranged from 72 to 409 minutes with a mean of 189 minutes. A large mesh (mean size 29x19cm) was placed extraperitoneal behind the rectus muscle to repair the abdominal wall defect. Twenty-six patients (65%) were discharged ambulatory or within 24 hours. The remaining 14 patients were discharged between 2-4 days

Three complications were recorded; including one seroma initially observed and subsequently drained, one early post-operative bleeding requiring laparoscopic intervention and drainage, and one abscess successfully treated with guided percutaneous drainage. Follow up to date is ongoing and zero recurrences have yet been observed (Table 2).

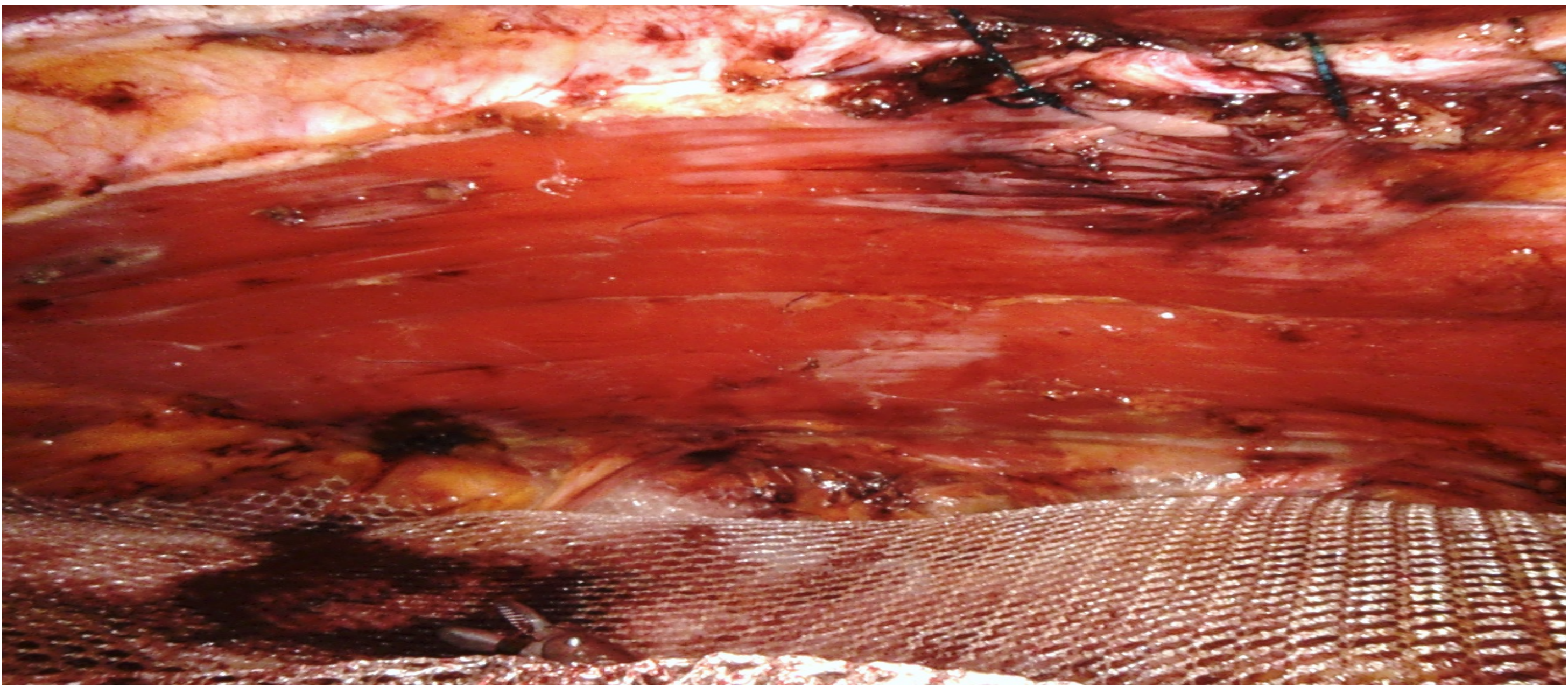


Figure 1: Mesh placed retrorectus with closure of the abdominal wall defect

Table 1:

Intra-operative parameters	
Defect size (cm ²)	111
Mesh size (cm ²)	560
Operative Duration (min)	189
Post-operative parameters	
LOS (days)	1.1
Discharge POD 0-1 (n)	26

Table 2:

Post-operative follow up (months)	n
< 1	16
1-3	8
4-6	5
7-9	2
10-12	6
>12	3

Discussion and Conclusions

Robotic assisted laparoscopic incisional hernia repair with TAR for large incisional hernias (on average > 100cm²) is technically feasible, has a short hospital stay, quick recovery, happy patients, and excellent outcomes in a limited follow up to date.