

A Laparoscopic Extraperitoneal Approach to an Incisional and Inguinal Hernia Repair: A Case Report

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Abstract

Extraperitoneal hernia repair has become increasingly popular for inguinal hernia repair. Incisional hernia repairs are routinely repaired through an open procedure or a transabdominal laparoscopic approach. We present a patient who presented with both inguinal hernias and an incisional hernia. Our patient underwent a totally extraperitoneal hernia repair of both his inguinal hernias and his incisional hernia.

Introduction

Extraperitoneal hernia repair has become increasingly popular for inguinal hernia repair. However, few extraperitoneal incisional hernia repairs have been described. Incisional hernia repairs are routinely repaired through an open procedure or a transabdominal laparoscopic approach. We present a patient who presented with both inguinal hernias and an incisional hernia.

Case report

A 70 year old man presented to our clinic complaining of bilateral inguinal bulging and was found to have bilateral inguinal hernias on exam. He had no previous history of hernias. His only previous abdominal surgery was an open appendectomy 26 years prior. On exam, he was noted to have bilateral reducible inguinal hernias as well as a small incisional abdominal hernia located in the right lower quadrant at the at his appendectomy scar. The patient had a CT scan available for review which had been obtained for an unrelated reason (Figure 1A,1B).

In the operating room, we repaired the patient's inguinal hernias via laparoscopy using an extraperitoneal approach with a Bard polypropylene mesh. During our dissection of the extraperitoneal space, we visualized the incisional hernia which measured 3 x 2cm. Given the entire hernia was visualized and there were no adhesions, we proceeded with a repair using a 7 x 6 cm Bard polypropylene mesh. We used titanium tacks to secure the mesh without suture fixation.

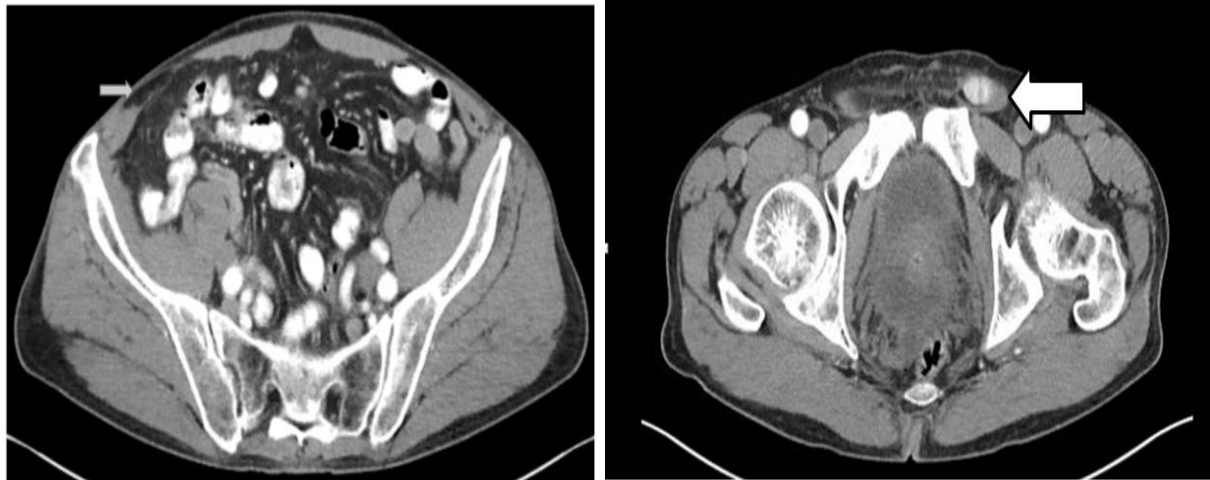
Postoperatively, the patient did well and went home the same day. At his postoperative clinic visit, he had no evidence of recurrent hernia.

Discussion

Laparoscopic hernia repairs are increasing in popularity in the US. Laparoscopic repair is associated with less pain and shorter recovery time. With inguinal hernias, the totally extraperitoneal (TEP) repair avoids entering the abdominal cavity unlike the transabdominalpreperitoneal (TAPP) approach [1]. The TEP repair is associated with less visceral injuries and port site hernias compared with the TAPP repair [2]. However, the TEP repair requires more operator experience and comfort.

We presented a case of a totally extraperitoneal approach of a repair of a McBurney's incisional hernia. The initial operative plan was a laparoscopic approach for the inguinal hernias followed by an open approach for the incisional hernia. Given the proximity of the incisional hernia to our extraperitoneal dissection, we were able to accomplish a totally extraperitoneal repair of our patient's incisional hernia.

Adhesions near the incisional hernia site may increase the difficulty of extrapolating this repair to more incisional hernias. Hsieh and Chou presented a combined intraperitoneal and extraperitoneal repair of a McBurney's incisional hernia [3]. Our totally extraperitoneal repair was possible due to the lack of adhesions and accessibility from our dissection for the inguinal hernia repairs.



Figures: The patient had a CT scan available for review which had been obtained for an unrelated reason

We used a prolene based mesh and secured our mesh using titanium tacks. Brady et al described a partially extraperitoneal mesh repair of an incisional hernia without the use of tacks [4]. Given our method of not entering the peritoneal abdominal cavity, we did not utilize an absorbable tackler.

Conclusion

Incisional hernias may be amenable to a laparoscopic extraperitoneal repair depending on their size and location. The hernia defect must be able to fully visualized with adequate space for mesh placement. Given that this requires an infrequently utilized plane, the risk of visceral injury, extraperitoneal repairs require an experienced operator. Long term outcomes are unknown, but this repair seems to be safe and effective.

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