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COMPARING ROBOTIC VERSUS OPEN SURGICAL APPROACHES FOR INCARCERATED DIAPHRAGMATIC HERNIA REPAIR

Hannah Sidoti, MD

BACKGROUND

Incarcerated diaphragmatic hernias are a rare complication after traumatic injuries. This is a case comparison between two patients who presented to our institution with left sided incarcerated diaphragmatic hernias within days of each other in August 2024. Both males were from South American countries and had traumatic injuries to the diaphragm that had been missed on trauma workup in their native countries. The first patient was treated with a robotic surgical approach while the second was treated with an open surgical approach. Both patients remained hospitalized for approximately 1 day and discharged in stable condition.

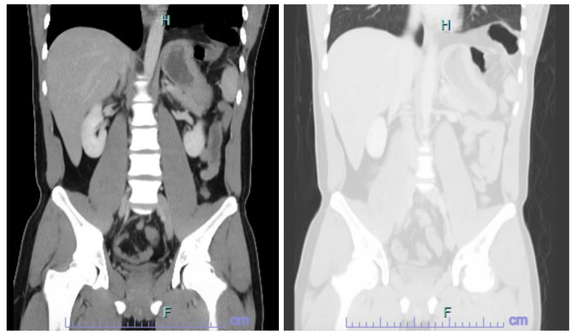
CASE DESCRIPTION

Case #1: The first patient was a 24 year old male who presented with acute onset abdominal and chest pain. He had been a victim of stabbing 3 years prior and had not undergone operative exploration in his home country. He was taken to the operating room where via 3 8mm trocar sites a robot diaphragmatic hernia repair was performed. The patient's splenic flexure and omentum was incarcerated through the diaphragmatic hernia. No resection was indicated as the large bowel appeared viable using ICG. The diaphragmatic defect was repaired with interrupted 0 Ethibond suture. He was discharged on postoperative day one.

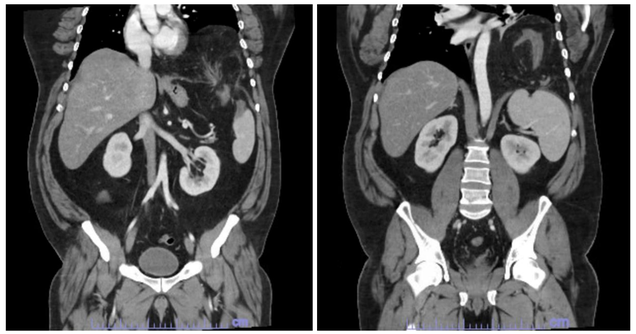
Case #2: Our second patient presented two days later. He was a 40 year old male who presented with one day of acute onset abdominal pain. He had been struck with a large piece of glass approximately 15 years prior to presentation. This was not treated at that time in his home country. He was taken to the operating room for open diaphragmatic hernia repair via a left subcostal incision. He was also found to have incarcerated large bowel and omentum. The defect in the diaphragm was closed with looped 0 PDS suture. He was discharged on postoperative day one.

CONCLUSION

Currently, there is no gold-standard surgical approach to diaphragmatic hernia repair. At our institution, approaching incarcerated diaphragmatic hernias either robotically versus open demonstrated nearly equivalent outcomes in pain control, diet tolerance, and length of stay. These patients were treated by different surgeons and according to preference and comfort level. Both patients had good outcomes with equivalent length of stay time and pain control.



Case #1



Case #2

Hackensack Meridian
Hackensack University
Medical Center