Early Experience with Robotic Assisted Perforated Ulcer Repair in a Private Practice

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Introduction

Perforated peptic ulcer disease is a common surgical emergency. The classic treatment is a midline laparotomy however as surgeons become more efficient with minimally invasive techniques, robotic repair is now a viable option. The purpose of this case series is to describe our initial experience with four patients who successfully recovered after robotic assisted closure and graham patch repair.

Methods

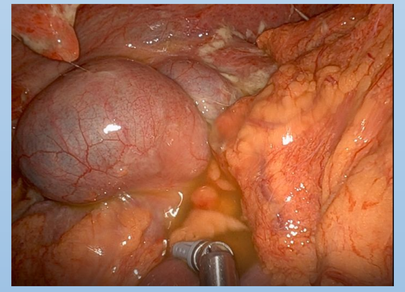
There were 4 patients who underwent robotic perforated ulcer repair from February 2021 to July 2021. The perforations were repaired by primary suture closure followed by application of an omental patch. All cases had a postoperative drain as well as a decompressive nasogastric tube. Each patient underwent an upper GI evaluation prior to initiation of diet. Intravenous antibiotics and therapeutic dosing of Proton Pump inhibitors were given to all patients.

References

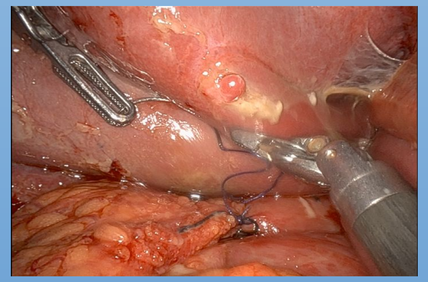
Sanabria A, Villegas MI, Morales Uribe CH. Laparoscopic repair for perforated peptic ulcer disease. Cochrane Database Syst Rev. 2013 Feb 28;(2):CD004778. doi: 10.1002/14651858.CD004778.pub3. PMID: 23450555.

Sze Li Siow, Hans Alexander Mahendran, Chee Ming Wong, Mark Hardin, Tien Loong Luk. Laparoscopic versus open repair of perforated peptic ulcer: Improving outcomes utilizing a standardized technique, Asian Journal of Surgery, Volume 41, Issue 2, 2018.

Figures







Results

The average operative time was 68.8 minutes. The average stay was 5.25 days which is comparable to open repair None of these patients had a postoperative abscess, leakage from repair or surgical site infection.

Discussion

Robotic assisted oversew is a technical option in selected patients presenting with perforated gastric ulcer. Patients have to be able to tolerate pneumoperitoneum and be hemodynamically stable. One technical concern is the ability to perform copious abdominal lavage, however no patients in this series had a postoperative abscess. At this time, Robotic technique seems to be comparable to open repair with the advantages being less incisional pain, less hernia risk and improved cosmetic results. This represents our earliest experience with employing robotic assistance for emergency general surgery at a community hospital. Larger populations will be required for proper analysis of outcomes and costs. This has the potential to be superior in a number of ways.