Is a Minimally Invasive Approach to Diverticulitis with a Colovesicular Fistula Reasonable?

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BACKGROUND

- Colovesular fistulas are an uncommon but significant complication of diverticulitis
- Many surgeons feel that complex inflammatory surgery (i.e. fistulas) precludes a minimally invasive surgical (MIS) approach
- The purpose of our study is to explore if complex diverticulitis with colovesical fistula can be safely and effectively treated in an MIS fashion

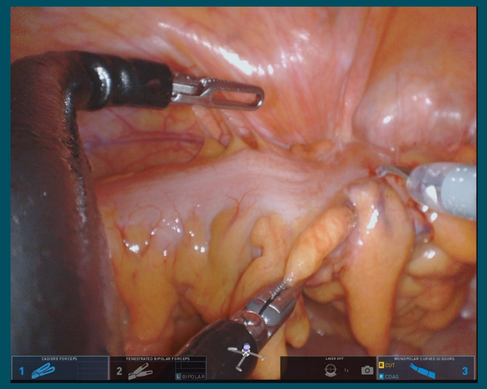
METHODS

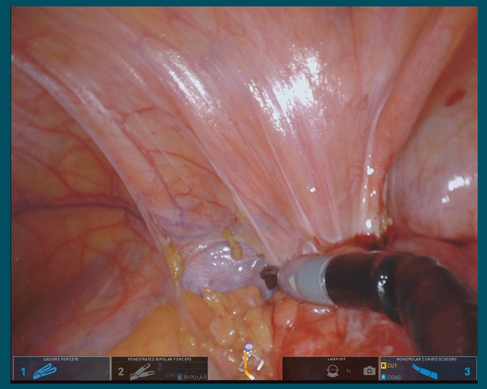
- Data was collected from a prospectively maintained MIS database
- All procedures performed by a single surgeon at a tertiary referral center
- Inclusion Criteria:
  - Preoperative diagnosis of diverticulitis with a colovesical fistula
  - Elective minimally invasive surgical approach
- Primary Endpoints:
  - Ability to avoid permanent stoma
  - Conversion rate to open
  - Success rate of bladder repair
  - Anastomotic leak rate
  - Postoperative morbidity and mortality

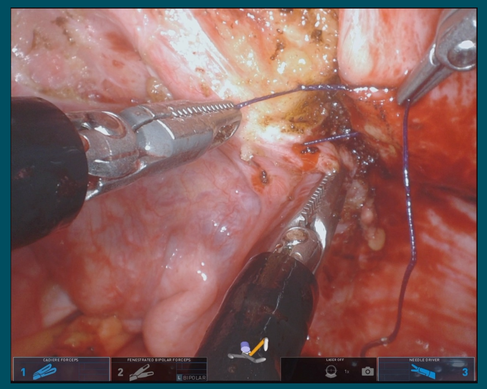
RESULTS

Avg BMI • BMI 30-35 • BMI >35	28.1 (17.4-46.8) • N=5 (17.8%) • N=3 (10.7%)
<u>Presenting symptoms</u> • Pneumaturia • UTI • Abdominal pain • Fecaluria • Hematuria • Air in bladder on CT	<u>N=</u> 17 (60.7%) 12 (43.9%) 9 (32.1%) 7 (25%) 4 (14.3%) 4 (14.3%)
Minimally Invasive Procedure • Anterior Resection (AR) • AR with diverting ileostomy • Hartmann Procedure Laparoscopic Robotic	N= • 22 (78.6%) • 1 (3.5%) • 5 (17.9%) 19 (67.9%) 9 (32.1%)

Mode LOS (days)	4 (Range 3-64)
Postoperative Cystogram • Yes • Leak found • No	N= • 19 (67.9%) • 3 (7.1%) • 9 (32.1%)
Morbidities • Abscess • Anastomotic Leak • Hartmann Pouchvesical Fistula • Wound Infection • UTI	N=14 (50%) • 5 (17.8%) • 1 (3.5%) • 1 (3.5%) • 1 (3.5%) • 2 (7.1%)
Recurrent Diverticulitis	N=1 (3.5%)
Mean follow-up (months)	23 (Range 0-76.6)







RESULTS (continued)

- N=2791 MIS procedures performed from 1996-2020
  - N=728 with diverticulitis
    - N=28 with colovesicular fistula
- Mean Age: 68.3 y/o (36-90)
- Gender:
  - 15 women, 13 men

- *<u>Primary Endpoints:</u>*
  - Avoidance of Stoma formation:
    - 85.7% (N=24)
  - Conversion rate:
    - 0% (N=0)
  - Success rate of bladder repair:
    - 89.3% (N=25)
  - Anastomotic leak rate:
    - 3.5% (N=1)
  - Morbidity:
    - 50% (N=14)
  - Mortality:
    - 0% (N=0)

CONCLUSION

- An MIS approach for the repair of colovesical fistulas from diverticulitis can be performed safely with high success of bladder repair and avoidance of stoma, with a low anastomotic leak rate and mortality.

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