LAPAROSCOPIC SIGMOIDECTOMY SHOULD BE THE STANDARD OF CARE FOR COMPLICATED FISTULIZING DIVERTICULAR DISEASE

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Introduction

Compared to standard sigmoidectomy, the laparoscopic approach for fistulizing diverticular disease is less frequently used and entails a conversion rate to open surgery ranging from 22 to 42%.

Objectives

To assess the **feasibility and safety** of laparoscopic sigmoidectomy for complicated **fistulizing diverticular** disease in a tertiary care center.

Methods

- Single-center observational study
- Consecutive patients undergoing sigmoidectomy for fistulizing diverticular disease (2011 to 2021)
- **Primary outcomes :**
  - **Conversion rate to open surgery**
  - **Clavien-Dindo complications ≥ grade III** (III; requiring intervention, IV; life-threatening)
- Comparisons between the groups with and without ≥ Clavien-Dindo grade III morbidity

Results

N = 104 patients → 50% of previous abdominal surgeries, including 33% of laparotomies
Most common fistula types were **colovesical (58%), colovaginal (19%) and multiples fistulas (13%)**

Table 1: Intraoperative characteristics

	n = 104 (%)[a]
Elective surgery	90 (87)
Primary surgical approach **Laparoscopic** Open	 **103 (99)** 1 (1)
Diverting ileostomy	12 (12)
Stappled circular end-to-end anastomosis	104 (100)
Operative time (minutes)[b]	193 (165; 238)
Blood loss (mL)[b]	100 (50; 250)
Conversion to laparotomy Reason for conversion Difficult dissection, adhesions Aortic trauma	**6 (6)** 5 (5) 1 (1)

[a] Results are proportions (percentages) unless stated otherwise
[b] Results are medians (interquartile range)

Patients with grade ≥ III Clavien-Dindo complications :
- Older (64 vs 76 years, p=0.03)
- More emergent surgeries (11 vs 40%, p=0.03)
- More multiple concomitant fistulas (10 vs 50%, p=0.02)
- Longer operative time (192 vs 240 minutes, p=0.04)
- Higher blood loss (75 vs 300 ml, p=0.01)

Table 2: Postoperative outcomes and 30-day complications

	n = 104 (%)[a]
Length of postoperative stay (days)[b]	4 (3; 7)
Clavien-Dindo postoperative morbidity None I and II **≥ III**	29 (28) 75 (72) 19 (18) **10 (10)**
Anastomotic leak	2 (2)
Final stoma-free patients	**101 (97)**
Management of urinary tract fistula Postoperative cystogram Positive Indwelling catheter ≤ 7 days	n = 73 41 (56) 2 (5) 59 (81)
Reoperation	7 (7)
Rehospitalization	6 (6)
Fistula recurrence	0 (0)
30-day mortality	1 (1)

[a] Results are proportions (percentages) unless stated otherwise
[b] Results are medians (interquartile range)

Discussion

- **Largest reported series** of sigmoidectomies fully performed by laparoscopy
- Although half of the cohort had previous abdominal surgery, only 1 upfront laparotomy
- By **minimally selecting patients** for the laparoscopic approach, the well-established advantages of laparoscopy benefit a larger group of patients
- **Conversion rate of 10% vs 22-42% reported in the literature**
- If feasible, surgery in an **elective** setting should be attempted

Conclusions

Laparoscopic sigmoidectomy for complicated fistulizing diverticular disease should be the standard of care.
In our series, the laparoscopic approach was offered to **almost all patients** and was associated with a **low conversion rate, few postoperative serious complications, and a high rate of restoration of bowel continuity.**

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References on demand