SHORT-TERM OUTCOMES OF LAPAROSCOPIC VS. OPEN PARASTOMAL HERNIA REPAIR: CAN OSTOMIES BE SAFELY REVERSED OR REVISED?

Christine Tung, MD, Junko J. Ozao-Choy, MD, FACS, Beverley Petrie, MD, FACS, FASCRS, Christian M. de Virgilio, MD, FACS, Ashkan Moazzez MD, MPH, FACS;
Harbor-UCLA Medical Center, Torrance, CA

INTRODUCTION

- 60% of ostomies are complicated by parastomal hernias (PSH)
- Here, we examine short-term outcomes of laparoscopic vs. open PSH repair and determine whether revision/reversal affects these outcomes

METHODS

- The ACS-NSQIP database (2015-2018) was used to identify patients with an ICD-10 diagnosis of PSH undergoing laparoscopic or open repair
- Coarsened exact matching was used to match the two groups
- Outcomes such as morbidity, SSI, hospital LOS, and operative times were compared
- Multivariate logistic regression was performed to determine whether revision/reversal is associated with SSI

RESULTS

- A total of 1942 patients underwent PSH repair [laparoscopic (n=547; 28.2%) vs. open (n=1395; 71.8%)]
- Patients in the laparoscopic group were more likely to be:
  - white (85.6% vs. 81.6%; p=0.037)
  - ASA class 1 or 2 (34% vs. 27.2%; p=0.003)
  - elective cases (84.5% vs. 70%; p<0.001),
- And less likely to have:
  - pre-op sepsis (2.4% vs. 6.9%; p<0.001),
  - component separation (1.5% vs. 5.5%; p<0.001),
  - revision/reversal (3.7% vs. 57.7%; p<0.001)
- Of the 547 laparoscopic cases, 394 patients were matched 1:1 with the open group
- In both aggregate and matched cohorts, there were no differences in mortality, readmission, or reoperation rates
  - Laparoscopic PSH was associated with lower rates of morbidity, superficial SSI, shorter LOS and longer operative times

Table 1. Short-term outcomes of laparoscopic vs. open PSH repair

	Aggregate Cohort			Matched Cohort		
Outcome	**Laparoscopic**	**Open**	**p-value**	**Laparoscopic**	**Open**	**p-value**
Morbidity	10.2%	20.5%	p<0.001	10.9%	18%	p=0.005
Superficial SSI	0.7%	7.1%	p<0.001	1%	6.1%	p<0.001
Deep SSI	0.2%	2.2%	p=0.002	0.3%	1.8%	p=0.069
LOS (Days)	4.2±5.2	6.6±6.4	p<0.001	4.6±5.5	5.4±5.6	p=0.041
Op. Time (Min)	153.6±74.9	140.1±88.1	p=0.001	154.6±74.6	128.7±85.6	p<0.001

RESULTS

- In the multivariate logistic regression, the following were associated with increased risk of SSI:
  - BMI (OR: 1.02; 95%CI:1.00-1.05; p=0.046),
  - inpatient status(OR:2.07; 95%CI:1.06-4.04;p=0.034),
  - wound classification (OR:1.3; 95%CI:1.03-1.62; p=0.24),
  - open approach (OR:2.50; 95%CI:1.52-4.10; p<0.001)
- Revision/reversal of an ostomy had no association with increased risk of SSI

CONCLUSIONS

- Laparoscopic PSH repair is associated with less morbidity, superficial SSI, shorter LOS, and longer operative times compared to open PSH
- Revision or reversal of ostomies did not affect short-term outcomes