Timing Of Minimally Invasive Colostomy Reversal After Emergent Hartmann's Procedure For Acute Complicated Diverticulitis

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BACKGROUND

- An obligatory wait period for colostomy reversal after an emergency Hartmann's for diverticulitis facilitates easier handling of intraoperative adhesions reducing morbidity and increasing successful closure.
- The 6 months wait that is currently widely employed for Hartmann's Reversal (HR) may be arbitrary since there is limited evidence guiding this decision.

METHODS

- From a prospective institutional outcomes database, patients who underwent minimally invasive HR for diverticular disease between 2012-2022 were included.
- Based on the time interval from index operation, HR was divided into early (<6 months) and late (≥6 months). Demographics, comorbidity, intraoperative variables, and postoperative outcomes were retrieved.
- Univariable association between timing of reversal and outcomes was assessed.

TABLE 1. **Selected baseline characteristics and outcomes of patients undergoing minimally invasive HR for diverticular disease.**

	Overall cohort (n, %) 50 (100)	Early HR (n, %) 25 (50.0)	Late HR (n, %) 25 (50.0)	Univariable p-value*
Age (median, IQR)	62 (14)	62 (12)	62 (17)	0.8
Female sex	24 (48.0)	13 (52.0)	11 (44.0)	0.6
ASA**				0.09
2	24 (48.0)	15 (60.0)	9 (36.0)	
3	26 (52.0)	10 (40.0)	16 (64.0)	
Body mass index kg/m^2 (median, IQR)	26.4 (7)	25.9 (7)	26.5 (8)	0.4
Time interval before HR (median, IQR)	5.5 (3)	4 (2)	7 (3)	<0.01
Intra-operative outcomes				
Conversion to open surgery	16 (32.0)	9 (36.0)	7 (28.0)	0.5
Diverting stoma	10 (20.0)	4 (16.0)	6 (24.0)	0.7
Post-operative outcomes				
Any complication	12 (24.0)	5 (20.0)	7 (28.0)	0.5
Anastomotic leak	1 (2.0)	0 (0.0)	1 (4.0)	1
Ileus	13 (26.0)	5 (3.7)	8 (32.0)	0.7
Reoperation	1 (2.0)	1 (4.0)	0 (0.0)	1
Readmission	5 (10.0)	3 (12.0)	2 (8.0)	0.7
Ileostomy reversed	9 (18.0)	4 (16.0)	5 (20.0)	1
Length of stay, day (median, IQR)	4.5 (3)	4 (2)	5 (3)	0.8

*Univariable p-values calculated using Pearson's chi-squared test for categorical variables, and Mann-Whitney U test for non-parametric variables. P-values < 0.05 determined to be statistically significant. **ASA, American Society of Anesthesiology.

RESULTS

- Fifty (60.2%) out of 83 Hartmann Reversals done during the study period were minimally invasive. Median interval between index procedure and HR was 5.5 months (IQR 3).
- Twenty-five patients (50.0%) had early and 25 (50.0%) late HR. The 2 groups were comparable for demographics and comorbidities.
- Overall conversion to open surgery rate was 32.0% (n=16), 9 patients (36.0%) after early and 7 patients (28.0%) after late Hartmann Reversal (p=.38). Any 30-day post-operative complication rate was 24.0% (n=12); 5 (20.0%) and 7 (28.0%) (p=.37) after early and late Hartmann Reversal.
- Rates of diverting stoma, intraoperative complications/transfusions, surgical site infection, anastomotic leak, ileus, reoperation, readmission, and ileostomy reversal were also similar, as well as length of stay.

CONCLUSION

- Hartmann Reversal can be safely performed minimally invasively with good outcomes in experienced hands.
- The interval between index procedure and Hartmann Reversal did not significantly impact conversion rates and outcomes at a high-volume center.

DISCLOSURES

The authors report no disclosures.