Acute Hartmann's Reversal: A review of reversal rates, timing of and barriers to reversal

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Background

Acute Hartmann's procedure is commonly performed for perforation or obstruction related to sigmoid or rectal pathology. The most common indication being complicated diverticulitis.
The subsequent reversal of an end colostomy following resolution of inflammation or contamination improves patient's quality of life although is associated with significant morbidity and mortality.
Reversal rates for acute Hartmann's vary widely from 28.3-69%.[1] Although studies lack consistency with respect to timelines and inclusion criteria. There remains a lack of consensus for timing of reversal with recent evidence suggesting suggesting no difference in significant morbidity or mortality following reversal from as early as 45 days with appropriate patient selection.[2]

Aim

To evaluate the stoma reversal rates for patients following acute Hartmann's procedure and investigate the timing of and barriers to reversal.

Methodology

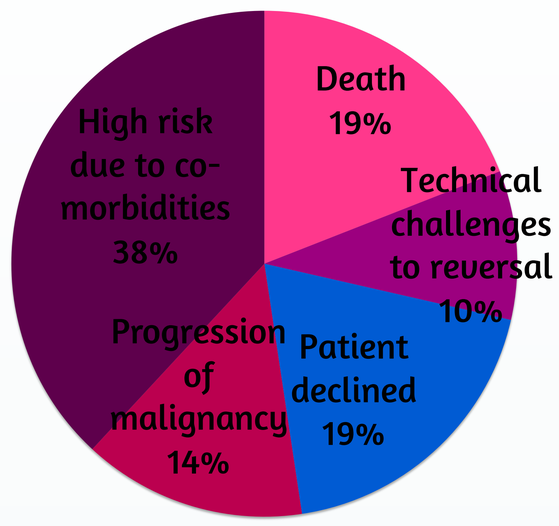
A retrospective single centre review was performed that included all patients who underwent acute Hartmann's procedure from 2014 to 2018. Data was collected from patients' clinical records and operative reports. A literature review was performed to assess our performance in comparison to reported rates of reversal.

Results

Acute Hartmann's procedure was performed in 81 patients over a five-year period. The most common indication was acute complicated diverticulitis at 50.6% followed by malignancy at 22.2%. In-hospital mortality at primary admission was 9.9% and of those who survived for consideration of reversal (73), a one-year reversal rate of 42.5% was achieved. Median time to reversal was 8 months (range 2-57 months).

Only 47.9% of patients who underwent acute Hartmann's procedure were stoma free at 2 years following their initial operation. The most common reason documented for non-reversal was "deemed high risk" due to co-morbidities (38%) followed by patient preference (19%) and death (19%) from primary admission or cancer related mortality. Barriers to reversal included age, female gender and race. Only 40% of females who underwent acute Hartmann's proceeded to reversal, in comparison to 61.3% of males while reversal rates for Maori were much lower than other ethnicities at 33.3%. Following Hartmann's reversal there were no 90-day mortalities and only one anastomotic leak.

Reason for Acute Hartmann's	N
Tubulo-ovarian abscess	1
Anastomotic leak	2
Diverticular stricture	2
Ischaemia	3
Stercoral perforation	4
Trauma / Foreign body	4
Other malignancy	6
Sigmoid / Rectal malignancy	18
Perforated diverticulitis	41
TOTAL	81



Hartmann's Reversal Rates

		N	% Reversed
Survived primary admission		73	
Reversed	Total	39	53.4%
	<12 months	31	**42.5%**
	Covering ileostomy	7	9.6%
Stoma free at 2 years		35	**47.9%**

Demographics

	All patients	Reversed	%
Age (Median)	65	55	
Gender			
M	31	19	61.2%
F	50	20	**40.0%**
Ethnicity			
NZ European	64	31	48.4%
Maori	9	3	**33.3%**
Pacific Islands	4	3	75.0%
Asian	4	2	50.0%

Conclusions

One year reversal rates for acute Hartmann's procedure vary widely (28.3 to 63%).[1,2] These findings may be explained in that some studies have chosen to include mortalities during the primary admission when calculating reversal rates. There remains debate on the optimal timing of reversal. Our median time to reversal (271 days) and stoma free survival at 2 years (47.9%) are within range of the published literature.
Race and gender have been demonstrated as a barrier to reversal in this study which is supported by similar findings in studies in both America and the UK.[4,5.]

References

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