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27. SURGICAL INTERVENTION FOR MECHANICAL LARGE BOWEL OBSTRUCTION AT A TERTIARY HOSPITAL: WHICH PATIENTS RECEIVE A STOMA AND HOW OFTEN ARE THEY REVERSED?

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Background: The surgical management of large bowel obstruction (LBO) is heterogeneous and influenced by multiple variables such as patient stability, etiology and intraoperative findings. The aim of this study was to analyze and compare the various surgical interventions and outcomes of patients necessitating surgery for mechanical LBO.

Methods: Patients with a mechanical LBO between 2000-2017 were included in the study. Diagnosis of volvulus, pseudo-obstruction, anastomotic stricture, and hernia were excluded. Main outcomes measures included intraoperative findings, operative management, post-operative outcomes and stoma closure rates. Univariate analysis was performed to compare surgical management and outcomes.

Results: 133 patients were included with a mean age of 65 years (31-100), 57% were female. Most were left sided 82% (n=109) versus right sided 18% (n=24). Most common cause of LBO was colorectal cancer (CRC) in 44%. 110/133 patients (82.7%) underwent operative intervention (Table).

The most common operation performed was fecal diversion without resection (n=51; 46.4%) with the most frequent etiology being extrinsic compression (n=26/51; 51%) followed by CRC (n=17/51; 33%). This group had significantly more stage 4 carcinoma (n= 35/51; 69%, P =0.001) as well as carcinomatosis at the time of surgery (24/51; 47%, p<0.001), the lowest stoma closure rate (n=9; 17.6%), and significantly higher comorbidity index (p=0.012).

Overall, 85% of the operated patients underwent some type of fecal diversion, of these, 27.6% had stoma reversal at a median time of 6 months (range, 0.75-27). Patients that had a resection and anastomosis with diverting loop ileostomy (DLI) were most likely to undergo stoma reversal (61.5%, p=0.005) and had the lowest number of patients with stage 4 carcinoma (n=3; 23%). 30-day post-operative complication rate was 21.8% and mortality rate was 11%. Patients with an intraoperative finding of proximal bowel ischemia (9%) were found to have the highest rate of surgical site infection rates.

Conclusion: In this single institution analysis, the management of mechanical LBO entails high operative and stoma rates for patients with stage 4 carcinoma, with less than 30% of patients undergoing eventual stoma closure. Resection and anastomosis plus DLI had the highest chance of stoma reversal potentially due to less advanced disease.

	Diversion only (N=51)	Resection + anastomosis + Diversion (N=13)	Resection + End Ileostomy (N=15)	Resection + End Colectomy (N=15)	Resection + Anastomosis (N=16)	p-value
Number (% total)	51 (46.3)	13 (11.8)	15 (13.6)	15 (13.6)	16 (14.5)	
Age	64.4±15.5	66.9±12.1	61.6±13.2	68.7±13.7	67.1±14.8	0.66
Gender -Female	27 (53)	9 (69)	12 (80)	6 (40)	8 (50)	0.169
BMI	25.8 [23.2,29.7]	23.3 [20.7,30]	27.1 [21.6,29.3]	27 [25,29.8]	26.1 [23,34.7]	0.727
Stoma Closure (%)	9 (17.6)	8 (61.5)	3 (20)	6 (40)	N/A	0.009
Median CCI	8 [6.0,9.0]	6 [4.0,6.0]	4 [3.0,8.0]	6 [3.0,8.0]	5.5 [4.0,8.0]	0.012
Location Right/Left	6/35	1/12	2/13	0/15	9/7	
Etiology						<0.001
- Colorectal cancer	17 (33)	5 (38)	7 (47)	9 (60)	11 (69)	
- Extrinsic compression	26 (51)	1 (8)	2 (13)	1 (7)	1 (6)	
- Diverticular disease	5 (10)	6 (46)	2 (13)	4 (26)	4 (25)	
- Other	3 (6)	1 (8)	4 (27)	1 (7)	0	
Stage IV Carcinoma	35 (69)	3 (23)	5 (33)	5 (33)	4 (25)	0.001
Surgical Complications						
- Deep Incisional SSI	0	1 (8)	3 (20)	0	0	0.005
- Organ Space SSI	2 (4)	2 (15)	3 (20)	0	1(6.3)	0.10
- Postop Sepsis	2 (4)	1 (8)	1 (7)	1 (6.3)	0	0.58
- Anastomotic Leak	N/A	1 (8)	N/A	N/A	0	0.13
Mortality	7 (13.7)	1 (7.7)	2 (13.3)	2 (13.3)	1 (6.3)	0.8