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Original Research Article

Retrospective Study on Incidence, Contributory Factors and Outcome of Ostomies

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Abstract: Stoma formation is a common procedure in surgical practice, particularly in colorectal surgery. They are relatively easy to form and are used for faecal diversion from a diseased bowel, avoidance of an intestinal anastomosis in cases of intra-abdominal sepsis or where intestinal recontinuity is not possible or unsafe. We have studied 108 patients who had stoma formation from the period June 2015 to march 2017. This is a retrospective study of various ostomies done in our institute from June 2015 to march 2017 and overlooked for the patterns of indications, surgical techniques and various outcomes. A total of 108 patients were studied and about 52% of ostomies were done in emergency theatre. Most common indications were hollow viscus perforation and adhesive obstruction. Ileostomy (50%) was the commonest procedure followed by colostomy (28%). Complications of stoma formation were skin excoriation followed by prolapse. Most of the stomas were reversed late with mean duration before reversal being six months. Abdominal surgery is incomplete without stomas and the art of stoma formation is an indispensable armamentarium of a general surgeon. We have reviewed various factors associated with the outcome of stoma surgery and the data will help the preoperative patient counselling regarding the outcome of stoma surgery.
Keywords: Stoma, ileostomy, colostomy complications.

INTRODUCTION:

A stoma is a surgically designed intestinal conduit for the temporary or permanent fecal diversion. Stoma is the hallmark of abdominal surgery and general surgery units bear a huge load of this type of surgery. They are relatively easy to form and are used for faecal diversion from a diseased distal bowel, avoidance of intestinal anastomosis in case of intra-abdominal sepsis or in cases where intestinal continuity is not possible or unsafe. If it is constructed for faecal diversion for unhampered healing it can be reversed at a later stage. The technique of stoma formation has a direct impact on complication and reversal at later stage. The aim of our study was therefore to evaluate our own experience and determine the incidence, contributory factors, complications and outcome of ostomies[1] in our institute from the period June 2015 to march 2017.

MATERIALS AND METHODS:

This is a retrospective study of the patients in our institute from June 2015 to March 2017.Patients were admitted in the outpatient department or emergency ward depending on the severity of presentation. In acute emergency cases patients were resuscitated with intravenous fluids and antibiotics. Patients were clearly explained regarding the type of surgery, stoma formation and reversal in case of possible cases. Preoperative consents were taken from all patients regarding stoma formation. Complete blood examination, Renal function tests, X-ray chest and abdomen, Liver function test, Ultrasound abdomen and CT abdomen were taken prior to surgery as indicated. After surgery specimen sent for histopathological examination to aid in diagnosis. The reversal procedures were conducted in elective theatres after adequate mechanical and chemical bowel preparation. The data includes age, sex, indications for surgery, type of ostomy formed, site of ostomy [3] selected, comorbidities, complications, length of hospital stay, ostomy

reversal, interval until reversal and follow up evaluation were collected and data analysed.

RESULTS:

A total of 108 patients were studied out of which male were [84]77.8% and female were [24] 22.2%. The mean age of the group was 32.4 +15.2.The minimum age was 21 and maximum age was 86.About 48% of patients were admitted throughout patient department.52% presented in the emergency with acute abdomen or traumatic injury. The various indications for stoma surgery are as follows.

Table-1: Various Indications For Stoma Surgies

Indications	Number	Percentage
Small Bowel Obstruction	38	35.1
Sigmoid Volvulus	4	3.7
Colonic Growth	15	13.8
Mesenteric Ischemia	12	11.1
Trauma	10	9.2
Appendicular Mass	1	0.9
Hollow Viscus Perforation	28	25.9

Table-2: Types For Stoma

Ostomy	Number	Percentage
Ileostomy And Mucus Fistula	55	50.9
Jejunostomy	9	8.3
Colostomy	31	28.7
Ileostomy And Jejunostomy	3	2.7
Ileostomy And Colostomy	7	6.5
Ileostomy With Appendicectomy	1	0.9

Table-3: STOMAS [4]

Ileostomy	Colostomy	Jejunostomy
Loop (33) 31%	Double Barrel (15) 13.8%	Feeding (5) 5.4%
Double Barrel (30) 28% End Ileostomy (2) 2.3% Tube Ileostomy (1) 0.5%	Loop (16) 15.2% End Colostomy (1) 0.9% Diversion Colostomy (2) 1.3%	Non-Feeding (4) 3.8%

The complications of stoma formation were skin excoriation, ulceration, retraction, obstruction, wound infection, prolapse, parastomal herniation, wound dehiscence, Ileostomy diarrhoea, bleeding. There was no complication in 72%. Common complication was skin excoriation [6] (34%). Most of the complications were treated conservatively. Out of the stoma 64 [59.25%] were reversed rated with a mean duration before reversal being 6 months. Early reversal done in 5%.Regarding the technique single layer anastomosis was done in 14 [21.8%] and double layer anastomosis done in 50 [78.1%]. Complications of stoma reversal [2] were anastomotic leak 0.9% and obstruction 0.5%.Most of the patients died of MODS due to sepsis. The mean duration of hospital stay was 14.6 + 16.4 days depending on disease progress [8] and general outcome of the patient.

DISCUSSION:

The main aim of the study was to evaluate and determine the incidence, indication, complications and outcome of stomas in our institute during the period June 2015 to march 2017.The common indications were adhesive obstruction, perforation and malignant obstruction. Primary anastomosis was avoided in fulminant enteritis, septicaemia, bowel oedema, haemodynamic instability and malignant bowel perforation. Both ileostomy and colostomy have their inherent benefits [5] and advantages. Ileostomies [7] have better blood supply while colostomy survival depends on operator technique. In our study most of the stoma formation was performed in emergency and some in elective theatre related to malignancy. In our study there was no complication in 34% and in 90% of cases undergoing reversal. The majority of reversal was

done at a later stage and early reversal only in 4% of cases only. The late reversal allowed adequate time for subsiding the disease process and general build-up of the patient. However patients with early reversal had an unremarkable recovery with no postoperative complications. Therefore early reversal may be considered for jejunostomies and ileostomies. The limitations of this study include a retrospective study which showed the experience at a single institute which has the inherent biases. Moreover all the procedures were done according to surgeon's preference and expertise because of lack of uniform algorithm for the management of patients for specific abdominal surgery. The psychological aspect of the stoma surgery has to be studied. As there was no deliberate attempt to ask such questions before or after surgery.

CONCLUSION:

We conclude that a larger predictive study may be helpful in predicting the outcome of stoma surgery if it is multicentered and encompass the factors associated with stoma surgery in a greater detail. Our study has outlined the trends of patient presentation, diagnosis, outcome, and complication and reversal technique. It may help in understanding the diagnostics, intraop decision making and predicting the outcome in terms of both stoma formation and reversal surgery.

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