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To Study Morbidity and Mortality Related To Ileostomy / Colostomy Closure

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Abstract

Background: A Ileostomy/Colostomy is a lifesaving surgery that enables a person to enjoy a full range of activities, including traveling, sports, family life and work, even though they have a stoma and may wear a pouching system.

Material and Method: prospective & retrospective hospital based study. 50 patients reporting to the General Surgery dept. within study duration and eligible as per inclusion criteria will be included in the study.

Results: Overall, 19 (38%)patients developed complications post closure of ileostomy or colostomy (SeeTable 12). Medical complications accounted for a large proportion of complications (n=8), while major (n=6) and minor complications (n=5) were present.

Conclusion: ileostomy is effective and feasible as a diversion procedure and has reduced morbidity and complication rates.

Key words: Ileostomy, Colostomy. Complications.

Introduction

Stoma is a Greek word for mouth or opening[1]. An intestinal stoma is an opening of the intestinal tract into the abdominal wall. Ileostomies were first described by the German surgeon Baum in 1879 and later by the Bohemian surgeon Maydl in 1883[2]. In 1952, Brooke published his experiences with ileostomy construction and introduced a new method for suturing the mucosa to the skin[3]. Unlike the first colostomies, the first ileostomies were end stomas. Turnbull and Weakley were the first surgeons to describe the loop ileostomy (in 1971)[4].

The diverting loop ileostomy is a commonly used stoma that is often employed to diminish the consequences of an anastomotic leak in low-colorectal anastomoses, ileal pouchanal anastomoses, and in situations in which reversible patient factors increase the risk of an anastomotic dehiscence[5]. A defunctioning loop ileostomy is traditionally closed 6 to 12 weeks after the initial surgery[6]. Once anastomotic healing is confirmed, any systemic factors are corrected, and any fistulae are controlled or corrected, these ileostomies are typically closed through the stoma site without a formal laparotomy. Both loop ileostomy construction and subsequent closure are generally believed to be fairly straightforward, safe procedures with relatively low associated morbidity and mortality[7].

Material And Methods

Study design: prospective & retrospective hospital based study.

Study duration: 12 months (August 2015 to July 2016).

Study population: A patients in which ileostomy/colostomy closure done was selected for this study.

Sample size: 50 patients reporting to the General Surgery dept. within study duration and eligible as per inclusion criteria was included in the study.

Sampling Method: Convenience sampling

Inclusion Criteria

1. All patients with previous ileostomy/colostomy closure during emergency/elective surgery.

Exclusion Criteria

1. Patients whose data could not obtained from file
2. Stoma which is made for anorectal malformation and children
3. IBS(Inflamatry bowel syndrome)
4. Patients refusing for investigations or not interested for study

Data Collection: The data was collected from patients hospital folder, medical, anaesthetic and nursing record.

Result

Table 1: Indications for loop or end ileostomy /colostomy(N=50)

Indication	No. of Cases	Percentage
Cancer	27	54%
Perforation (any medical cause)	14	28%
Emergency Diversion (traumatic and others)	09	18%

The main cause for stoma were cancer 54%, Perforation (any medical cause) 28% and Emergency Diversion 18%.

Table 2: Distribution of cases according to co-morbid condition(N=50)

Co-morbid condition	No.of cases	Percentage
Diabetes	9	18%
Hypetension	11	22%
Renal Impairment	8	16%
COPD	4	8%
Total	32	64%

Out of 50 Cases ,(22%) patients had hypertension ,9 (18%) had diabetes, 8 (16%) had renal dysfunction and 4(8%) cases had COPD.

Table 3: Complications post ileostomy0r colostomy closure(N=50)

Complication	Minor complication	Major complication	Medical complication	Death	Total
No. of cases	5 (26.31 %)	6(31.57 %)	8(42.10 %)	0(0 %)	19(38%)

Overall, 19 (38%)patients developed complications post closure of ileostomy or colostomy (SeeTable 12). Medical complications accounted for a large proportion of complications (n=8), while major (n=6) and minor complications (n=5) were present.

Discussion

This prospective & retrospective hospital based study was conducted in surgery dept. on 50 patients reporting to the General Surgery dept. within study duration 12 months (August 2015 to July 2016) and eligible as per inclusion criteria were included in the study.

Although closure of ileostomy/colostomy is regarded as a relatively minor surgical procedure, it does require a second hospital admission which is accompanied by considerable costs, and is associated with significant morbidity [1].

In this study almost half the patients (38%) developed a complication which is

much higher than that quoted in the literature. The no mortality was found in the present study which is within the reported range. Most of the data regarding

complications following ileostomy closure comes from a small number of reviews done in USA, Spain, Turkey,india and Europe reflecting a morbidity of 3-30% and a mortality rate of 0-4% [8-10]. A recent study on 5,401 patients demonstrated a complication rate of 9.3% and a mortality rate of 0.6% [8].

The indications for the ileostomy /colostomy in this study included a mixture of patients with both rectal cancer and perforation mainly. Almost of the patients with Cancer developed complications. This could be one of the reasons for the overall high complication rate observed.

However, on comparison of the individual complication types with that reported in literature, most complications fall within the expected reported range[8].

In the present study, SBO occurred in 2% of patients, and is reported as 0-15% in the literature [9]. The anastomotic leak rate in this study was interestingly low (2 patient, 4%) and occurred as part of multiple major complications. In the literature the anastomotic leak rate alone varies between 0- 8% [9]. The enterocutaneous fistula rate of 2% in the present study was also in accordance with that reported (0.5-7%) [9].The rate of incisional hernia development was 2% and falls within the reported range of 1-12% [8-9].

Conclusion

ileostomy is effective and feasible as a diversion procedure and has reduced morbidity and complication rates.

Ethical approval: The study was approved by the Institutional Ethics Committee

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