

EVALUATION OF EARLY CLOSURE OF ILEOSTOMY

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ABSTRACT

Background: Ileostomy is used for surgical management of many congenital and acquired conditions of gastrointestinal tract. This study was conducted to evaluate the results of early closure of ileostomy.

Methodology: This case series was undertaken at Saidu Teaching Hospital Swat from January 2007 to January 2010. Closures were carried out with 2-3/0 vicryl (polygalactin 910) in two layers. Patients were kept in the ward postoperatively for 5-10 days, and any complication noted.

Results: The patients studied were 45; 28 males and 17 females, with male to female ratio of 1.6:1. Age range was 3-50 years. Duration of stoma was 7-40 days with average of 23.5. Three patients were operated in the same admission, the rest either in 2nd or 3rd admission. Sixteen patients had complications associated with stoma while the rest were admitted only for closure. All patients recovered from anesthesia uneventfully. Only 2 patients leaked post-operatively, both were having tuberculous abdomen, one died of sepsis and multiorgan dysfunction, and 2nd was re-explored and ileostomy refashioned. Eleven patients developed mild to moderate wound infection, among them 7 were already having skin excoriation. Three patients developed pelvic collection treated conservatively. Five patients remained in ileus for 5-8 days, kept on nasogastric suction and intravenous fluids and improved. Three patients presented later with incisional hernia.

Conclusion: Early closure of temporary loop ileostomy is safe with low morbidity and minimal mortality and reduces the chances of stoma related complications.

KEY WORDS: Ileostomy, Early closure, Complications.

INTRODUCTION

An Ileostomy is a surgical procedure in which a part of small gut i.e. ileum is brought to the surface, connected and left open on the anterior abdominal wall.

It is classified as temporary or permanent depending upon whether reversible or not.

The procedure is commonly used for surgical management of many congenital and acquired conditions of the gastrointestinal tract.¹

The closure of the stoma though thought to be minor surgical procedure, yet it may be associated with appreciable morbidity, such as wound infection, dehiscence or incisional hernia.² Delayed skin closure can prevent post stoma closure wound infection.³

This study was conducted to evaluate the results of early closure of ileostomy.

MATERIAL AND METHODS

This case series was conducted at Saidu Teaching Hospital, Swat. Total of 45 cases were included in the study, 28 males and 17 females with male to female ratio of 1.6:1.

The preoperative diagnosis as evident from their documents is shown in Table 1. Ages range was from 3 to 50 years with average of 26.5.

All patients were operated upon in the same unit. Initial surgery was not of any concern regarding place and surgical team. Time period between stoma formation and its closure varied from 7 to 40 days with average of 23.5.

In 3 patients closure was performed in the same admission while the rest were operated upon in 2nd or 3rd admission.

Sixteen patients were having some complication associated with stoma, while the rest were

Table 1: Preoperative diagnoses of patients.

S. No	Disease	No. Patients
1.	Abdominal trauma	18
2.	Enteric perforation	12
3.	Abdominal Kocks	8
4.	Small gut volvulus	2
5.	Worms obstruction	5

admitted only for closure. All the stoma were closed with either 2/0 or 3/0 vicryl (polygalactin 910) in two layers, first continuous and second interrupted. Patients were kept in the ward post-operatively for 5 to 10 days, and any complication noticed.

Data was analyzed using SPSS version 10.0. Frequency and percentages were computed to present categorical variables like age, sex, presentation and operative complications. No statistical test was applicable for this study.

RESULTS

In majority of our patients, we mobilized the stomas without any difficulty; only in two patients we found it difficult to mobilize the stoma because of tense adhesions. Preoperative contrast studies were performed in all cases for distal loops as loopogram. 12 of our patients needed blood transfusion 1-2 pints peri-operatively and most of them were patients who were admitted with complicated stomas. All patients recovered postoperatively from anesthesia uneventfully. Only two of our patients (4.5%) leaked post-operatively. Both were having tuberculous abdomen, out of whom one died because of sepsis and multiorgan dysfunction. Mortality rate in our study was 2.2%. The 2nd patient was re-explored and ileostomy refashioned.

Eleven patients developed mild to moderate degree of wound infection, among them 7 were already having skin excoriation. Three patients developed pelvic collection treated conservatively and improved. Five patients remained in ileus for 5-8 days, kept on nasogastric suction and intravenous fluids and potassium and improved.

Three patients presented later with incisional hernia.

DISCUSSION

Indication for closure of ileostomy is to establish bowel continuity when the primary disease condition has resolved. Temporary loop ileostomy is mainly used for fecal diversion in emergency surgery in our set up, while in the West it is mainly for protecting the low pelvic (colonic) anastomosis.⁴ Closure is usually performed not earlier than 8-12 weeks after the primary operation.⁴ The aim of our study was to evaluate the length of time between ileostomy construction and its closure, to quantify stoma related morbidity and to examine the potential advantages of early closure.¹¹ In our study 24.5% patients developed mild to moderate degree of wound infection and only 4.5% leaked post-operatively. The mortality rate in our study was 2.2% which is compatible with the results of a study by R.Bakx⁴ though in that study

the median period of stoma closure was 24 weeks (2-124 weeks).

The results of another study by Wong KS showed the complications rate of 11.5% comparable with our results.⁵

The results of another study by M. Rathnayake, in which the stoma was reversed at 12-60 weeks showed small bowel fistula in 0.9%, obstruction 0.9%, and rectovaginal fistula in 2.6%.⁶

Study of Lahat G et al was mainly concerned with poststomal closure wound infection yet they have not recommended delayed skin closure.⁷ The infection rate in their study was around 30%. Study of Kalady MF has shown better results than our study, but they have not mentioned the median closure period and method of closure.⁸ Results of many other studies are also comparable with our study regarding the stoma closure complications.^{9,10} Other studies¹¹⁻²¹ have shown similar results in which cases the closure was mainly performed with stapler gun.

There were only 3 cases of incisional hernias in our series, one at the stoma site and 2 at laparotomy midline scar. The incidence of incisional hernia (6.66%) in our study is compared favorably with other series.^{14,15,21}

CONCLUSION

Our study demonstrated that early closure of temporary loop ileostomy is safe and effective, with very low morbidity and minimal mortality and reduces the chances of stoma related complications.

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