Indications & Complications of Colostomy in Children

Ghulam Nabi Nasar

ABSTRACT

Objectives: To evaluate colostomy indications and associated complications as well as management of their complications. **Design:** Descriptive Study. **Place:** Children Hospital Quetta. **Period:** From March, 2013 to March, 2016. **Methodology:** This is a descriptive study of indications complications and their managements of all the patients admitted in Children Hospital for colostomy. The patients who were operated upon previously were excluded from the study. **Results:** Total number of the patients in which colostomy was done were 80. Colostomy complications occurred in 52 patients (65%). Most common complication was skin excoriation in 24 patients (30%), prolapsed in 12 patients (15%), burst abdomen in 2 patients (2.5%), per colostomy hernia in 1 patient (1.25%), 1 patient died due to multiple anomalies (1.25%). **Conclusions:** Adequate pre-operative counseling of parents, good stoma care and early stoma closure gives good results in our setup.

Keywords: Children, Indications, Colostomy, Complications.

Corresponding Author
Dr. Ghulam Nabi Nasar
Associate Professor, Pediatric Surgery
Bolan Medical College, Quetta
Contact: +92 321-8124028
Email: drghulamnabi1123@gmail.com

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INTRODUCTION

The construction of intestinal stoma (temporary) is an established procedure in pediatric population. Colostomy is commonly constructed in children and majority is done in neonates with high risk of anesthetic and surgical complications.[1]

Most common indications of colostomy in children are mainly congenital anomalies (Anorectal Malformation) and this results most stomas being constructed in neonates as emergency life saving procedure that may be clinically unstable.[2]

The basic purpose of performing the colostomy is to divert the faecal stream till the definite procedure is performed.

Colostomy in children is a temporary procedure done for treatment of a non-malignant procedure.

As a result of lack of facilities and manpower needed to carry out neonatal surgery and unstable patients under general anesthesia. Colostomy complications are higher than other centers

Colostomy is a routine procedure until the children's are fit to stand for definite procedure.

When improperly constructed colostomy complicates the management of these anomalies and even lead to death.

A variety of complications have been reported even with careful techniques, there is marked morbidity and mortality associated with creation of colostomy.[3]

Despite the most commonly performed procedure in children's few studies have been reported in literature on this subject.

The aim of this study is to analyze the complications in children and neonates.

METHODOLOGY

Study Design: Descriptive Study.

Place of Study: Children Hospital Quetta.

Duration of Study: This study was conducted over a period of 3 years from March, 2013 to March, 2016

Method:

All the patients admitted in Children Hospital requiring colostomy were included. Already operated patients were excluded from the study.

In each case detailed history physical examination were carried out followed by relevant investigation.

To avoid sigmoid loop colostomy retraction by using skin bridge of inverted "V" shaped incision. Most commonly created stomas were loop colostomies.

For divided colostomy a small gape was made in mesentery, bowel was divided and fixed to peritoneum and fashies.

The two separate ends were brought on the surface with skin bridge.

Proximal stoma was placed in lateral part of incision and distal stoma in medial part of incision. Same techniques was used for transverse colostomy.

Many complications were noted, included those which are the results of improper techniques during surgery and other complications are due to improper counseling of parents. Patients were divided in two groups according to indications of colostomy, type of colostomy.

The data obtained were analyzed using SPSS. There were 53 patients with anorectal malformation, 24 with hirschprung's diseases, two patients with trauma and one patient died excluded from the study.

RESULTS

There were 80 patients in our study in 3 year duration, with colostomy. Complications accrued in 52 patients. As whole 58 (72.5 %) patient were male and 22 (27.5%) patients were female. (Table 1) 55 patients were less then 1 month old. Most of these patients were operated in neonatal age of anorectal malformation. Patients presented with hursprung's diseases were operated at different age group. (Table 2)

Table 1: Indications of colostomy

No	Gender	No. of Patients	% age
1	Male	58	72.5 %
2	Female	22	27.5%

Table 2: Complications of colostomy

S. No.	Indications	No.	%age
1	Anorectal Malformation	53	66.25%
2	Hirshsprung's Disease	24	30%
3	Acquired Indications	3	3.75%

Morbidity and mortality were higher among anorectal anomaly then hursprung and other disease.
The delay in diagnosis of hursprung disease are mostly due to normally situated anus and no absolute constipation in many patients.
Out of 80 patients sigmoid loop colostomy created in 73 patients and transverse colostomy in 7 patients.

Table 3: Complications of colostomy

S. No.	Complications	No.	%age
1	Skin Excoriations	24	30%
2	Prolapsed	12	15%
3	Stoma Bleeding	12	15%
4	Burst Abdomen	2	2.5%
5	Paracolostomy Hernia	1	1.25%
6	Expired	1	1.25%

Complication accrued in 52 patients colostomy related and in 28 patients no complication observed. Because loop colostomy is one of the fastest procedure to create due to this mostly performed colostomy used in study. (Table 3)
In all skin excoriation was recorded in 24 (30%) patients and was managed with skin protective pastes like Zinc Oxide cream or Petroleum Jelly.
Colostomy prolapsed in 12 (15%) patients. This was very difficult for both Doctors and Parents, parents was worried despite adequate counseling.
Stoma edge bleeding was recorded postoperatively in 12 (15%) patients, which was controlled with pressure dressings.
Burst was noted in 2 (2.5%) patients with emergency closure in both cases.
Para colostomy hernia in 1 (1.25%) patient with no other complications resolves after colostomy closure.

DISCUSSION

The creation of colostomy is essential for children's, to decrease the risk of complications for definite procedure. In this study a period of 3 years, are spanned, congenital anomaly (mostly anorectal malformation) was a major indication for colostomy in these children's. The incidence is similar to that reported by, osifo-od. In this study the complication rate was 52 (65.4%) patients while the reported incidence colostomy related complications are (67.7%) as reported by Sofia etal's.[3]
The complications were studied collectively for anorectal malformation hirschprung's and other diseases.[4]
The incidence of complications after colostomy formation was (67.7%) in studied conducted by Mohammad Ali Sheikh etal's at Karachi.
Skin excoriation was a major complication to colostomy creation and was 24 (30%) patients having complications in these study.
This complication rate is more than the incidence reported by Mohammad Ali Sheikh etal's, osifo OD and Saleem etal's.[5,6,7] This has been due to constant exposure of the skin to the faecal matter, fungal infections and enzymatic digestion of the skin, mostly due to non appliance of colostomy bag, due to non-availability of good stoma care centers and non appliance of various creams.
Although skin protective was enough to prevent excoriation, deep excoriation in many patients were treated with early closures.
The non-availability of stoma bags due to high cost and proper application of bags was the major problem in the study.
The second most common complication in this study was colostomy prolapsed 12 (15%) patients.[8,9,10,11]

Controlling the prolapsed was very difficult and no method was satisfactory. The reported incidence prolapsed was (21.7%) to (73%).

The high incidence of colostomy prolapse is due to dilated colon in which colostomy was created, prolapsed patients were treated conservatively up to definite procedure.

Stoma edge bleeding was recorded the third most common complication in the study. Stoma edge bleeding was recorded in 12 (15%) patients. This is complication due to sensitive exposed bowel mucosa to the exterior.[12,13,14,15]

Pressure dressings controlled the problem in most of the patients, few patients were treated with iron supplements for blood loss to prevent anemia.

Burst abdomen were noted in 2 (2.25%) patients with emergency closure in both cases of trauma.[16,17,18] Paracolostomy hernia recorded in 1 (1.25%) patient and resolved after colostomy closure.[19,20]

One patient was died due to multiple anomalies.

CONCLUSION

Colostomy is most commonly performed procedure in our setup, complications of colostomy can be prevented by a good preoperative care, good operative techniques, post operative care and early stoma closure gave good results in our setup.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

AUTHORS	Contribution to The Paper	Signatures
Dr. Ghulam Nabi Nasar Associate Professor, Pediatric Surgery Bolan Medical College, Quetta	Main Author, Proof Reading, manuscript writing