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.

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

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. The aim of this study is to analyze the complications in children and neonates.
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>
<thead>
<tr>
<th>No</th>
<th>Gender</th>
<th>No. of Patients</th>
<th>% age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>58</td>
<td>72.5%</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>22</td>
<td>27.5%</td>
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</tbody>
</table>

### Table 2: Complications of colostomy

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Indications</th>
<th>No.</th>
<th>%age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anorectal Malformation</td>
<td>53</td>
<td>66.25%</td>
</tr>
<tr>
<td>2</td>
<td>Hirshsprung’s Disease</td>
<td>24</td>
<td>30%</td>
</tr>
<tr>
<td>3</td>
<td>Acquired Indications</td>
<td>3</td>
<td>3.75%</td>
</tr>
</tbody>
</table>

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.

**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.

The complications were studied collectively for anorectal malformation hirschprung’s and other diseases. 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. 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.
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 prolapose 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. 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. Paracolostomy hernia recorded in 1 (1.25%) patient and resolved after colostomy closure. 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.

REFERENCES

AUTHORSHIP AND CONTRIBUTION DECLARATION

<table>
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<tr>
<th>AUTHORS</th>
<th>Contribution to The Paper</th>
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<tbody>
<tr>
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<td>Main Author, Proof Reading, manuscript writing</td>
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