International Surgery Journal
Chanchlani R et al. Int Surg J. 2020 Jan;7(1):194-196
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20195968

Original Research Article

Indications and complications of colostomy in newborn: our experience

Roshan Chanchlani, Dhirendra Shrivastava*

Department of Pediatric Surgery, Gandhi Medical College, Bhopal, Madhya Pradesh, India

Received: 31 October 2019
Accepted: 03 December 2019

***Correspondence:**
Dr. Dhirendra Shrivastava,
E-mail: roshanchanchlani@gmail.com

ABSTRACT

Background: The aim of the present study was to evaluate the indications, complications and outcome of colostomy in newborn patients.
Methods: This is a descriptive, retrospective study carried out in the Department of Pediatric surgery, Gandhi Medical College Bhopal to evaluate acceptance and outcome of colostomy in newborn over a one year period from March 2018 to March 2019. All newborn with diagnosis of anorectal malformation, Hirshsprungs disease and other emergency conditions underwent transverse loop colostomy by expert and trained pediatric surgeon.
Results: Out of 40 patients operated complications of colostomy was seen in 18 (45%) patients. Most common complication was skin excoriation in 08 patients (20%), bleeding from stoma site in 02 (05%) cases. Stoma prolapse occurred in 02 (05%) patients. Wound infection, dehiscence, stomal stenosis and parastomal hernia was seen in one patient each 2 (2.5%). 2 (0.5%) patient died due to multiple congenital anomalies.
Conclusions: Colostomy in children is associated with significant morbidity in developing country. To minimize these problems, the pediatric surgeon should focus on the management and early closure of a colostomy.

Keywords: Anorectal malformation, Colostomy, Hirshsprungs disease

INTRODUCTION

A colostomy is defined as surgical procedure made in the large colon to convert the pathway of feces and flatus to the exterior. In newborn and paediatric patients mostly colostomy is done in the cases of congenital anomalies like anorectal malformation, Hirshsprungs disease, intestinal atresias.[1] The preponderance of congenital indications for colostomies is typical as most busy paediatric surgery units where Hirschsprung's disease and anorectal anomalies constitute the bulk of colostomy workloads.[2] The basic purpose of performing the colostomy is to divert the fecal stream till the definite procedure is performed. A variety of complications have been reported even with careful techniques, there is marked morbidity and mortality associated with creation of colostomy.[3] This life-saving operation is not a minor surgical procedure and many of its complications are preventable with good surgical technique and qualitative follow-up.[4,5] Despite the most commonly performed procedure in children few studies have been done on this subject. The aim of this study is to analyze the complications in children and neonates.

METHODS

This is a descriptive, retrospective study carried out in the Department of Pediatric Surgery, Gandhi Medical College Bhopal to evaluate acceptance and outcome of colostomy in children over a one year period from March 2018 to March 2019. All the patients admitted in paediatric surgery department requiring colostomy were included. In this series patient's demographic profile, indications for colostomy, colostomy complications, management were noted. The procedure was performed by consultant and trained pediatric surgeon. Already operated patients were excluded from the study. In each case detailed history, physical examination was carried

out followed by relevant investigation. In this study transverse loop colostomy was performed in all the patients. The operation was done under general anesthesia, supraumblical transverse incision was made and transverse loop colostomy made in all the patients. The data obtained were analyzed using SPSS.

RESULTS

In this series anorectal malformations and Hirshsprungs disease were the most common indications of doing transverse loop colostomy. Out of 40 patients operated there were 25 (62.5%) male and 15 (37.5%) female patients. Complications of colostomy were seen in 18 (45%) patients. Most common complication was skin excoriation in 08 patients (20%), bleeding from stoma site was seen in 02 (05%) cases. Stoma prolapse occurred in 02 (05%) patients, Wound infection, dehiscence, stomal stenosis and parastomal hernia was seen in one patient each. 2 (0.5%) patient died due to multiple congenital anomalies.

Table 1: Sex distribution of patients (n=40).

Gender	No. of patients	%
Male	25	62.5
Female	15	37.5

Table 2: Indications of colostomy (n=40).

Indication of colostomy	No. of patients	%
Anorectal Malformation	30	75
Hirschsprungs disease	08	20
Acquired conditions	02	05

Table 3: Complications of colostomy (n=18).

Complications	No. of patients	%
Parastomal excoriation	08	20
Stomal bleeding	02	05
Stoma prolapse	02	05
Wound infection	01	2.5
Stomal stenosis	01	2.5
Wound dehisence	01	2.5
Parastomal hernia	01	2.5
Expired	02	05

DISCUSSION

Colostomy is a common procedure performed in paediatric surgery. It may be associated with morbidity and mortality.[6] Over 90% of our childhood colostomies were performed for large bowel obstruction from Hirschsprung's disease or anorectal anomalies in keeping with the reports of Millar et al from South Africa.[7] The most frequent complications of colostomy are peristomal dermatitis, festering of parastomal fiber, parastomal hernia, loss of bowel and stricture scar of colostomy.[8,9] The worldwide incidence of colostomy-related complications ranges from 28-74% in various studies. The overall morbidity from colostomy has been reported to be as high as 42-75%.[10-12] Complications of colostomy in this study was seen in 18 (45%) patients. The most common complication in this study was parastomal skin excoriation which occurred in 8 (20.0%) patients. The causes for a high incidence of skin excoriation in our study were due to poor care of our patients with colostomy as most of these patients were uneducated and from remote areas. Barrier dressing and local skin ointment with petroleum jelly and zinc oxide was advised to all patients. Local bleeding occurred in 2 (5%) of our patients and was due to sepsis and jaundice, however It was managed with compression dressing. Other common complication observed was colostomy prolapse 2 (5%) as and it was most commonly seen in right loop transverse colostomy. Prolapse most commonly affected distal limb because distal limb is dilated and hypertrophy especially in Hirschsprung's disease. Wound sepsis which includes local wound infection, occurred in one patient (2.5%) most likely occurred due to improper nursing care. The septicemia patients were treated with broad-spectrum antibiotics. Stomal stenosis occurred in one patient (2.5%). The reasons for stenosis were due to a small opening that was created for colostomy and ischemia of margins of stoma which resulted in stenosis. A parastomal hernia developed in one patient (2.5%) and usually occurred in patient with poor abdominal wall muscle and with local infection 2 (5%) patients died because of associated cardiac anomalies. All the colostomised newborn babies with failure to thrive were admitted for nutritional rehabilitation by supplementary feeding under care of pediatric nutritionist.

CONCLUSION

Colostomy in children is associated with significant morbidity in developing country. To minimize these problems, the pediatric surgeon should pay close attention to the, management and early closure of a colostomy. Adequate pre-operative consent of parents, counseling, care gives optimum results.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Osifo OD, Osaigbovo EO, Obeta EC. Colostomy in children: indications and common problems in Benin city Nigeria. Pak J Med Sci. 2008;24:199-203.
2. Andivot T, Bail JP, Chio F. Complications of colostomies. Follow-up study of 500 colostomised patients. Ann Chir. 1996;50(3):252-7.
3. Mahmood SS, Abulhab RJ, Mohamed MJ. Where and why do we select the type and site of colostomy

in children below two years. IJMS. 2015;13(2):137-41.
4. Nour S, Beck J, Stringer MD. Colostomy complications in infants and children. Ann R Coll Engl. 1996;78(6):526-30.
5. Al-Salem AH, Grant C, Khawaja S. Colostomy complications in infants and children. Int Surg. 1992;77(3):164-6.
6. Chandramouli B, Srinivasan K, Jagdish S, Ananthakrishnan N. Morbidity and mortality of colostomy and its closure in children. J Pediatr Surg. 2004;39:596-9.
7. Millar AJ, Lakhoo K, Rode H, Ferreira MW, Brown RA, Cywes S. Bowel stomas in infants and children. A 5-year audit of 203 patients. S Afr J Surg 31(3):110-3.
8. Holschneider AM, Puri P. Hirschsprung's disease and allied disorders. 3rd ed. Berlin, Germany: Springer-Verlag; 2008.
9. Duchesne JC, Wang YZ, Weintraub SL, Boyle M, Hunt JP. Stoma complications: a multivariate analysis. Am Surg. 2002;68(11):961–6.
10. Stothert JC, Brubacher L, Simonowitz DA. Complications of emergency stoma formation. Arch Surg. 1982;117:3.
11. Sheikh MA, Akhtar J, Ahmed S. Complications/problems of colostomy in infants and children. J Coll Physicians Surg Pak. 2006;16(8):509-13.
12. Pena A, Migotto-Krieger M, Levitt MA. Colostomy in anorectal malformations: a procedure with serious, but preventable complications. J Paediatr Surg. 2006;41(4):748-56.

Cite this article as: Chanchlani R, Shrivastava D. Indications and complications of colostomy in newborn: our experience. Int Surg J 2020;7:194-6.