

# Complications of colostomy and their correction in children

## Abstract

**Aim of the study:** To study the causes of complications in children colostomy.

**Materials and methods:** There were 84 patients-with a colostomy in the clinic of TashPMI and the Department of Surgery of Republic Specialized Scientific Center of Pediatrics for the period from 2003 to 2013.

**Main results:** Complications of colostomy were detected in 44 patients. The most frequent complications were paracolostomic inflammatory complications-14(32%). 7(16%) patients developed to stenosis of colostomy. Evagination occurred in 8(18%) patients. Eventration was seen in-10(23%) patients.

**Conclusion:** Thus analysis of the causes of complications colostomy showed that the greatest number of them developed properly due to insufficient mobilization and fixation of ostomy's loop. Developed in our clinic method corrugating stoma led to a significant decrease in the number of complications.

**Keywords:** colostomy, parastomal complications, children

Volume 2 Issue 4 - 2015

**Nasirov MM**

Department of pediatric surgery, Tashkent Pediatric Medical Institute, Uzbekistan

**Correspondence:** Nasirov MM, Department of faculty pediatric surgery, Tashkent Pediatric Medical Institute, Uzbekistan, Email mansoornasyrov@gmail.com

**Received:** May 19, 2015 | **Published:** June 06, 2015

## Introduction

As for today, despite the large number of modifications of colostomy performing, complications of them have a high percentage.<sup>1,2</sup> The incidence of complications in children's colostomy depends on many factors, primarily on its type and varies widely from 25.2 to 54.3%.<sup>3</sup> The most frequent complications of colostomy are peristomal dermatitis, festering of parastomal fiber, parastomal hernia, loss of bowel and stricture scar of colostomy.<sup>4,5</sup> Treatment of complications presents certain difficulties.<sup>6-8</sup>

**Objective:** To study the causes of complications in children colostomy.

## Materials and methods

There were 84 patients-with a colostomy in the clinic of TashPMI and the Department of Surgery of Republic Specialized Scientific Center of Pediatrics for the period from 2003 to 2013 (Table 1). 9 patients underwent colostomy performance in the clinic of TashPMI and the Department of Surgery of Republic Specialized Scientific Center of Pediatrics. Colostomy was imposed by the technique developed in our clinic. The method consists of shirring intestine, which leads to the release of the contents colostomy portion wise. Rest of 35 patients with colostomy complications came from the regions. Colostomy was applied in order to decompress the bowel (intestinal paresis, peritonitis), anorectal malformations, and Hirschsprung's disease.

**Table 1** Types and indications for colostomy

Types indications	Right sided			Left sided	
	Girdaladze method	Colon's one wall ostomy	Coecostomy	Colon's one wall ostomy	One barreled colostomy to distal part of colon with corrugating
Anorectal Malformation	1	2	-	5	7
Hirschprung's Disease	6	2	2	6	19
Multiply Anorectal Fistulas	-	-	-	-	1
Postraumatic Rupture of Vagina and Rectum	-	-	-	-	1
Colon Stenosis after Nec	-	2	-	-	1
Congenital Bowel Impassibility	-	-	-	1	-

## Results

Complications of colostomy were detected in 44 patients. Table 2 shows complications schematically. The most frequent complications were paracolostomic inflammatory complications-14(32%). Parastomal infiltrate developed in mucocutaneous transition colostomy due to infection of postoperative wound edges intestinal contents. In 5(11%) patients colostomy was complicated with necrosis due to massive devascularization and redundant loops derived. 7(16%) patients developed to stenosis of colostomy, due to the superposition

of a large number of stitches on the ostomy's site, as well as the insufficient size of the hole in the abdominal wall (Figure 1).

Evagination occurred in 8(18%) patients, which has resulted due to living of a large abdominal free part of the colon in 5patients, and unfixated of bowel to side channels and aponeurosis at single-barrel stoma have 3children (Figure 2). Eventration was seen in-10(23%) patients developed after suturing the parietal peritoneum to the skin in 6 patients and performing of a single-row fixation skin and intestinal suture in 4patients.

**Table 2** Complications of colostomy

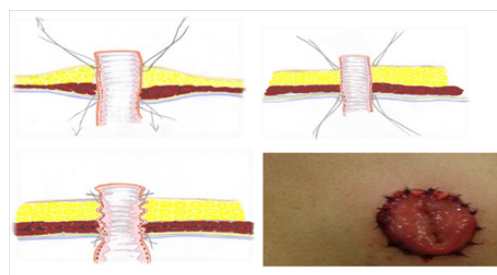
Colo -Stomy type	Complications					
	Paracolostomic inflammatory complications	Colostomy stenosis	Paracolostomy eventration	Colostomy evagination	Syndrome of unfunctioned bowel	Bowel calculus in the distal part of colon
Right Sided						
Girdaladze Method	3	1	1	1	1	-
Colon's One Wall Ostomy	-	-	-	3	-	7
Coecostomy	-	-	-	-	1	2
Left sided						
Colon's One Wall Ostomy	2	-	-	1	-	-



**Figure 1** The 2 years old child with colostomy stenosis.



**Figure 2** The 10 month-aged child with evagination.



**Figure 3** One barreled colostomy by Hartman's type with corrugating of bowel.

## Conclusion

Thus analysis of the causes of complications colostomy showed that the greatest number of them developed properly due to insufficient mobilization and fixation of ostomy's loop. The major complications of colostomy were paracolostomic inflammatory complications, which were eliminated using local therapy; necrosis, stenosis of the stoma; eventration, due to the superposition of single-row fixation sutures and suturing the parietal peritoneum to the skin; evagination related to insufficient fixation guts to parietal peritoneum and abdominal leaving a large free prestomal part of the colon. Developed in our clinic method corrugating stoma led to a significant decrease in the number of complications (Figure 3).

## Acknowledgements

None.

## Conflict of interest

The author declares no conflict of interest.

## References

1. al-Saleem AH, Grant C, Khawaja S. Colostomy complications in infants and children. *Int Surg.* 1992;77(3):164–166.
2. Holschneider AM, Hutson JM. Anorectal Malformations in children. *Embryology, diagnosis, surgical treatment, follow-up.* Berlin Heidelberg, Germany: Springer-Verlag; 2006.
3. Patwardhan N, Kiely EM, Drake DP, et al. Colostomy for anorectal anomalies: high incidence of complications. *J Pediatr Surg.* 2001;36:795–798.
4. Holschneider AM, Puri P. *Hirschsprung's disease and allied disorders.* 3rd ed. Berlin, Germany: Springer-Verlag; 2008.
5. Duchesne JC, Wang YZ, Weintraub SL, et al. Stoma complications: a multivariate analysis. *Am Surg.* 2002;68(11):961–966.
6. Teich S, Caniano DA. *Reoperative pediatric surgery.* Humana Press, a part of Springer Science+Business Media, LLC; 2008.
7. Millar AJ, Lakhoo K, Rode H, et al. Bowel stomas in infants and children. A 5-year audit of 203 patients. *S Afr J Surg.* 1993;31(3):110–113.
8. Park JJ, Del Pino A, Orsay CP, et al. Stoma complications: the cook county hospital experience. *Dis Colon Rectum.* 1992;42(12):1575–1580.