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COMPLICATIONS OF COLOSTOMY AND THEIR MANAGEMENT

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ABSTRACT

Objectives: To know about the incidence of different complications of colostomy and to take appropriate measures to prevent and treat these complications.

Material and Methods: This prospective study was carried out in surgical unit Saidu Teaching Hospital Saidu Sharif Swat from Feb 2009 to Jan 2012. All patients of both sexes from new born up to 80 years of age admitted to surgical unit who underwent colostomy were included in the Study. Complications associated with colostomy were recorded.

Results: Total number of patients was 60. Colostomies performed in infants and Children were mainly for Anorectal Malformation or Hirschsprung's disease, who were later on sent for definitive procedures, to specialized units, while in Adults it was done for Colorectal Carcinoma, Trauma , high Level Fistula in Ano or Colovesical Fistula. In 39 patients sigmoid while in 21 patients transverse colostomy was constructed. Complications related to colostomy occurred in 23 (38.33%) patients. Diarrhea, Skin Excoriation, Hair around Colostomy, Propalse and Wound infection were the common post operative complications . 6(10%) patients, 4 infants and 2 adults died postoperatively.

Conclusion: Well fashioned and properly placed Colostomy, proper Stoma care, application of good quality and well fitted Colostomy appliance, education about colostomy care and early treatment of Colostomy Diarrhea are important factors for prevention of different complications.

Key Words: Colostomy, complications, colorectal Carcinoma.

INTRODUCTION

Intestinal Stomas play a key role in elective and emergency surgery, they are often necessary to prevent devastating complications or save life. Counseling of patients and careful construction prevent complications and minimize the effect of intestinal stoma[1].

Colostomy is an artificial opening made in the large bowel to divert faeces and flatus to the exterior, where it can be collected in an external appliance[2,3]. Depending upon the indications, Colostomy may be temporary or permanent but fortunately majority of these colostomies are temporary[4]. A Colostomy does not require spout as facess are not usually irritant to the skin[5].

Colostomy plays a vital role in the management of wide range of congenital and acquired conditions in infants/children and adults. In infants and children main indications for Colostomy are Anorectal Anomalies,[6-7] and hirchsprung's disease[8]. While in adults it is mainly carried out for Colorectal Carcinoma, Trauma, High Level Fistula in Ano or Vesico colic fistula.

Temporary Colostomy is commonly established in children for Anorectal Anomalies or Hirchsprungs's Disease while in adults to defunction an anastomosis after an Anterior Resection, to prevent Faecal Peritonitis developing following Traumatic injury to rectum or colon and to facilitate the operative treatment of a High level Fistula in Ano and Vesico colic Fistula.

Permanent Colostomy is formed after excision of rectum for a Carcinoma by Abdominoperineal technique or whenever Carcinoma Rectum or Colon is inoperable.

Common sites for colostomy are right upper

quadrant and left ilac Fossa, where the Transverse or Sigmoid colon is brought to the surface respectively. The primary role of the colon is absorption of sodium and water, converting the liquid contents of terminal Ileum to a stool. Thus distal colostomies or not associated with metabolic disturbances[1]. In Sigmoid Colostomy faeces are harder as compared to Transverse Colostomy and in turn minimize complications . When incorrectly constructed the rate of complication of Colostomy is high in patients of all age group and in infants it can complicate or delay definitive procedure and can even lead to death[9,10]. Even with careful technique there is marked morbidity and mortality associated with colostomy[11]. This study aimed to observe the incidence of complications of colostomy and to take necessary measure to prevent and treat these complications.

MATERIAL AND METHODS:

This was prospective study carried out on 60 patients of all age group from new born upto 80 years of both sexes. 34 patients admitted through Casualty Department and 26 electively via Surgical OPD. Eighteen (18) were children and 42 were adults.

Patients admitted through casualty had signs symptoms of intestinal obstruction or Peritonitis, patients came through OPD were thoroughly examined, investigated and diagnosed. Patient either emergency or elective prepared for surgery in emergency or for elective list respectively. Preoperatively Nasogastric tube was passed and patients were put on IV fluid & IV antibiotics. During operation the cause was dealt with and depending on indication, Colostomy was constructed either in RUQ (right upper quadrant) or in LIF (lift iliac fossa) by Suturing Colon to the skin with 2/0 vicryl/pds depending on surgeon's preference.

All patients of any age group and sex, requiring stoma were included in the study. Those patients who were malnourished, diabetic, on long term steroid therapy, immunosuppressant theraphy, cardiac disease, chronic chest ailment, morbid obesity, renal and hepatic failure were excluded from the study.

All 60 patients operated 39 had Sigmoid Colostomy and 21 had Transverse Colostomy for different diseases.

Out of Thirty four (34) patients operated in emergency, 7 underwent transverse colostomy, 4 for penetrating injury (L) colon and 3 for obstructing Carcinoma of descending Colon. In remaining 27 patients Sigmoid Colostomy was constructed, Out of these 27 cases of Sigmoid colostomy, 10 infants were operated for anorectal anomalies, 9 patients for penetrating anorectal Injuries, 5 patients after Hartmann's procedure for Carcinoma at Rectosigmoid Junction, while 3 were operated for obstructing carcinoma of rectum.

26 patients were operated electively, out of which 14 had transverse colostomy. Eight (8) children for Hirschsprung's diseases and 4 patients after Anterior.

Resection for carcinoma rectum and 2 patients after Resection of Carcinoma descending colon. In remaining 12 patients sigmoid clolosomy was performed, 4 each for inoperable carcinoma Rectum and high level Fistula in Ano, and 2 each after Abdominoperineal resection for carcinoma Rectum and Vesicocolic fistula. Standard postoperative protocol was followed in form of Nasogastric suction. IV Fluids, IV antibiotics, analgesics etc till full recovery & proper functioning of the stoma.

N/G tube was removed and patients allowed orally once colostomy started function. Colostomy care was explained to the Patients & relatives by the concerned Doctor & staff nurse during their stay in the hospital. Average hospital stay was 6 days and on discharge instructions were given about the Stoma care, for follow up and for any other problem which can arise later on.

RESULTS

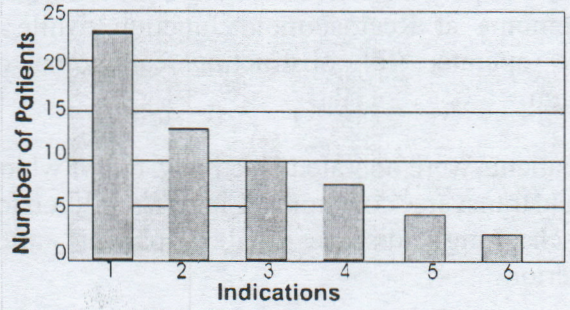
Total of 60 patients were admitted to Surgical unit Saidu Teaching Hospital in 3 years time, in whom Colostomies were performed. Different

indications for Colostomy are shown in table I.

Table 1:
INDICATIONS FOR COLOSTOMY (n=60)

1.	Colorectal Carcinoma
2.	Colorectal Injuries
3.	Anorectal Anomalies
4.	Hirschsprungs Disease
5.	High Level Fistula in Ano
6.	Vesicocolic Fistula

Figure 1



34 patients were operated in emergency and 26 electively. 23 (38.33%) patients developed different complications. C ommon complications encountered were colostomy diarrhea, skin excoriation, hair around Colostomy, prolase and wound infection. Different complication are shown in Table II.

Table II
COMPLICATIONS OF COLOSTOMY IN INFANTS/CHILDREN AND ADULTS (n=60)

Complications	Total No. of Infants & Children (n-18)	Total No of Adults (n-42)	Overall incidence of complications (n-60)
Skin Excoriation	11(61.11%)	9(21.42%)	20(33.33%)
Colostomy Diarrhea	8 (44.44%)	6 (14.28%)	14(23.33%)
Colostomy Prolapse	7 (38.88%)	11(26.19%)	18 (30.00%)
Hair around colostomy	4 (22.22%)	31 (73.80%)	35(58.33%)
Wound infection	7(38.88%)	10 (23.80%)	17 (28.33%)
Bleeding	2(11.11%)	6 (14.28%)	8(13.33%)
Stenosis	1 (5.55%)	2(4.76%)	3(5.00%)
Retraction	2(11.11%)	2 (4.76%)	4 (6.66%)
Weight loss	4(22.22%)	4(9.52%)	8(13.33%)
Septicemia	3(16.66%)	4(9.52%)	7(11.66%)
Death	4(22.22%)	2(4.76%)	6(10.00%)

Petroleum jelly and paste of Zinc oxide were the common agents used to protect the skin around the stoma. Application of antifungal cream and timely treatment of diarrhea with antidiarrhoeal helped to reduce chances of skin excoriation. Hair around Colostomy were shaved when required. Good quality and properly fitted colostomy appliances were used to minimize skin contact with the Colostomy contents. 7(16.66%) patients needed revisions of colostomy, (3) due to Stenosis and (4) due to Retraction.

6(10%) patients (4 infants and 2 adults) died postoperatively, 4 (22.22%) infants who died had Colostomy for Anorectal Anomalies, while 2 (4.76%) adults died had Colostomy for advance Carcinoma Rectum.

DISCUSSION

Colostomy is a life saving procedure practiced from Ancient time[12]. Colostomy can save life of a patient, but it has got its own complications and even the patient can die[13]. Incidence of complications shown in table II. In our study mortality and incidence of complications were high in infants and Children as compared to adults. Mortality in infants and Children was 22.22%, while in adults it was 4.76%. Any surgical procedure in infants and children can lead to high mortality due to Septicemia, Hypothermia, Electrolytes imbalance and Hypoglycemia etc. These are major causes of death in infants and children[7]. Colostomy Diarrhea and Skin Excoriation were slightly more common in patients with Transverse colostomy than patients with Sigmoid Colostomy. Prolapse, parastomal hernia, Bleeding, Stenosis and intestinal obstruction due to adhesions were seen in patients of all age group. Most of the complications of colostomy were not so serious and could easily be managed by patients or relatives and their education and awareness regarding Colostomy will reduce the incidence of complications[14]. Skin excoriation was minimized by simple application of Petroleum jelly and antifungal cream and timely treatment of diarrhea, daily dressing was done for wound infection.

Proplapse Colostomy was managed

conservatively while retraction and stenosis needed refashioning. Intestinal obstruction was also treated surgically. Besides the physical complications of Colostomy, there are also psychological complication[15]. Many of our patients felt that their quality of life was reduced and for this purpose regular advice from a physician was taken. The overall complication rate is our study is up to 38.33%, which is high comparing to studies carried out in other centers which is 15-20%,[16] but still not discouraging in our limited resources.

The only weakness of this study is that separate study on infants, children and adults would have more better results as this one. Similar comparable results have been shown by other researchers recently[17-19].

CONCLUSION:

Colostomy being a life saving procedure is nuisance and socially not acceptable to patients and relatives, but luckily most of the Colostomies are reversible. Education of patients, relatives and general awareness in the public will improve the quality of Stoma care and will reduce the incidence of complications, and also the role of Stoma clinic and Stoma therapist can be instrumental in preventing complications associated with colostomy.

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