

# Colostomy Care in Paediatric Patients

Jahanara Rahman

Tutor, Ruffaida College of Nursing, Jamia Hamdard University, New Delhi, India

**Abstract:** A colostomy is a surgical opening (stoma) made from the colon that passes through the abdominal wall. It allows stool to bypass a diseased or damaged part of the colon. It can be constructed through any point along the length of the colon and it can be temporary or permanent. Unlike in adults, colostomy in children is usually made as a temporary measure which is reversed after the primary pathology is taken care of.

**Keywords:** colostomy, stoma care, Hirschsprung's disease, colostomy bag, stoma effluent

## 1. Indications

Colostomies in children are frequently performed to relieve obstruction resulting from congenital anomalies such as Hirschsprung's disease, anorectal malformation, and occasionally for pelvic and perineal tumours, Crohn's disease and rectal perforation<sup>1</sup>. Although it is mostly temporary in nature colostomy care in children requires skilled care and intimate involvement of physician, parent, nurses and stoma therapist.

## 2. Basic Facts About Colostomy

Before we discuss about the colostomy care, it is prudent to briefly know about the problems and complications of colostomy. Ideally, the colostomy and its site should be planned beforehand and plan of care discussed with the parents except in the condition of colorectal perforation or toxic colon. The stoma may be a loop colostomy (fig.1) where a loop of colon is exteriorised, an end colostomy (fig.2) where the cut end of colon is taken out or along with the end colostomy distal non-functional bowel end is brought out as mucous fistula. The complications of colostomy are usually due to improper stoma site, compromised vascularity, and skin erosion and infection due to imperfect effluent management<sup>2</sup>. There may be bleeding from the stoma or obstruction due to tight skin or sheath through which the bowel is exteriorised. Later on, there may be stricture (fig.3) or prolapse (fig.4) of the stoma and parastomal herniation (fig.5). While judicious placement of colostomy avoids many complications, meticulous care of stoma and skin with appliances and colostomy bags prevent nagging skin complications<sup>3</sup>.

## 3. Appliances for Colostomy Care

- Pouching system consisting of collection pouch or plastic bag which may one-piece system (fig.6) or a two-piece system (fig.7) comprised of a base plate and a separate collecting pouch fitted on the base plate in an airtight seal mechanically or with adhesive.
- The pouch or bag can be open ended (drainable) and closed end (disposable).
- A charcoal filter is fitted in the bag to absorb bowel gases to control the odour.
- Two piece bags are sometimes fitted with a belt to secure the appliance,

- Accessories such as skin friendly adhesive cream, powder, gel, measuring guide, scissor, gloves are important tool for stoma care (fig.8)

### Important points to note in the post-operative period in a child with colostomy<sup>4</sup>

- Bleeding from the stoma site.
- Fever
- Redness, swelling and discharge from the wound (features of SSI)
- Colour of stoma
- Signs of dehydration
- Watery stool
- Very hard stool
- No gas or effluent from the stoma
- Nausea, vomiting, cramping or bloating

These conditions warrant vigilance and should be reported to the treating surgical and gastroenterologist team.

### Applying and changing the colostomy bag

A transparent one-piece colostomy bag is preferred in the post-operative period to enable a clear look of the stoma and its effluent.

- It is important to measure the stoma using the measuring grid supplied with the stoma kit. Using scissors, an opening is cut in the skin barrier following the traced shape avoiding cutting through the front of the pouch.
- The skin around the stoma is cleaned with water and dried. The stoma should be covered with gauge piece to avoid spillage of the effluent on the skin.
- A thin layer of barrier paste is applied on the skin around the stoma. The customised and trimmed skin barrier is placed over the stoma which should not be too big to allow effluent over the peristomal skin nor too tight to cause irritation of the stoma.
- Any ulcerated or eroded skin should be covered with barrier powder or gel. Any leak from the bag should prompt for early change to prevent the skin from getting eroded.

### When to change the colostomy bag?

The wear time of the bag or pouch typically ranges from 1-2 days in infant and up to 3 days for child depending on stoma effluent output, activity and other factors. The following conditions warrant change of the bag:

- The loose or leaking bag to prevent skin damage.

- The child complains of itching or burning over the peristomal skin.

#### Emptying the bag

The bag requires emptying several times a day.

- It should be emptied when it is 1/3-1/2 full of gas or stool. An overfilled bag will get loose leading to leak and skin damage.
- The bag should be emptied before naptime, bedtime or going outdoor.

#### Food and stoma effluent

Usually the colostomy output will be semisolid or formed stool with characteristic odour.

- Cabbage, cauliflower, egg, fish, onions and some spices will increase the odour of the stool.
- Colostomy bags have inbuilt odour-barrier film to control the smell. Moreover, the bags are fitted with filters which let the gas escape but not the odour preventing ballooning of the pouch.
- Certain foods such as beans, sprouts, garlic, onions etc. and drinking through straw may increase gas.
- There may be diarrhoea in children with colostomy. Certain food such as yoghurt, banana, white rice, cheese or noodles may be tried to thicken the stool.

#### Guidelines for activity

- Bathing: Water does not harm the stoma and can be done with the pouch on or off. The skin around the

stoma should be dried and integrity of the skin barrier checked.

- Swimming: An ostomy belt or waterproof tape can help securing the bag while swimming.
- Sleeping: The pouch should be emptied before nap and bedtime. Sleeping on abdomen does not hurt stoma but infants should sleep on their back.
- Clothing: Tight garments or the one with waistband might hurt the stoma and should be avoided.

#### Useful recommendations

- The colostomy bag should be changed when the stoma is less active such as in the morning or two hours after meals.
- It should be done when the child is quite and cooperative with the appliances and all the accessories ready beforehand.
- Stoma therapist is of help until the parents or guardian are trained and comfortable doing it on their own.

#### 4. Conclusion

Colostomy in infants and children requires passionate care, requisite skill and substantial endurance. Fortunately, colostomy in most of these patients is temporary, nevertheless requires the utmost care of the stoma and skin around it along with the maintenance of the nutritional and social needs of the child for a healthy outcome.



Figure 1: Loop colostomy



Figure 2: End colostomy



Figure 3: Colostomy stricture



Figure 4: Colostomy prolapse



Figure 5: Parastomal hernia



Figure 6: One piece colostomy bag system



Figure 7: Two piece colostomy bag system with base plate

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