Diaper ileostomy appliance

S. Devaji Rao

Received: 8 November 2009 / Accepted: 23 January 2010
© Association of Surgeons of India 2010

Abstract Ileostomy complications relating to surrounding skin are common when it is constructed with the proximal ileum, due to the irritative nature of the effluent, and ill fitting appliances. I report an improvised ileostomy appliance using a diaper, to treat the skin excoriations, which should be useful in situations where surgeons do not have an option other than creating a proximal ileostomy at an unconventional site.

Keywords Ileostomy · Appliance · Diaper ileostomy appliance

Introduction

Skin excoriation causes extreme distress to a patient with ileostomy. Ileostomy is created at conventional sites during elective surgeries like total colectomy. Emergency situations like performing massive resections of gangrenous bowel due to ischemic bowel disease, does not allow the surgeon to choose the conventional site, and the surgeon has no option than to create an ileostomy especially using the proximal bowel at a very unconventional site (Fig. 1). Many custom made appliances are available for this situation, but utilizing a diaper to absorb the secretions of the excoriated skin is novel and worth the attempt in healing the skin, quickly taking the patient to a situation of using conventional bags.

Material and methods

To prepare a diaper ileostomy appliance, the requirements are

1. An adult diaper
2. Disposable single piece ileostomy bag

The diaper is held horizontally over the abdomen in a stretched fashion, so that the waist bands lie at the sides to be stuck at the back. The absorbing area should lie on the skin directly. The opening is marked on the diaper at the place of the ileostomy stoma, and a circular opening is made so as to accommodate the ileostomy (Fig. 2). The diaper is placed on the abdomen, so that the absorbing surface lies on the excoriated abdominal wall skin, and the vertically lying waist bands are strapped with strong adhesive tapes at the back. A disposable single piece ileostomy bag is stuck on the lined surface of the diaper, so that the ileostomy pouts into the bag, and the effluent pours directly into the bag. To make it tight fitting, elastic belts or elastic adhesive tapes

S. D. Rao
Department of Surgery,
Dhanwanthri Surgical Clinic and St. Isabel's Hospital,
Chennai, India

E-mail: devajiraos@yahoo.co.in

Fig. 1 Unconventional ileostomy for large resection of gangrenous bowel

Fig. 3 Diaper ileostomy appliance applied on the patient

Fig. 2 Diaper ileostomy appliance

can be applied on the lined surface of the diaper, above and below the ileostomy, transversely (Fig. 3).

The diaper absorbs the oozing serous discharges of the previously damaged skin, thus facilitating healing of the skin. It also has the added advantage of absorbing small spillages that occur around the ileostomy. Once the healing is complete, conventional bags (one piece or two piece) can be used.

Result

This was tried in 8 patients with excellent healing in 6–8 days.

Discussion

A well constructed ileostomy stoma should allow the patient to display normal physical vigor, to eat well balanced palatable diet, and to engage in normal recreational and sexual activity. The skin should remain normal and the appliance should not leak.

The components of an ileostomy appliance are a skin barrier, some type of adhesive disc, the faceplate and a drainable pouch. Most ileostomy appliances are now commercially available as one piece or semi disposable two piece units. A one piece system means that the wafer and the bag all in one piece and is disposable as a whole. Two piece system consists of a wafer and the bag are separate joined by a ring on the wafer. The bags can either be disposable or reusable. The wafer may need to be changed every week. Most stomas are not a perfectly round shape and the pre-cut wafers may not be suitable and opening in the wafer has to be made to the required size, to prevent spillage.

Skin excoriation from leakage remains the most common complication of an ileostomy, particularly in badly sited stoma, where application of an appliance is improper [1–3]. Intestinal contents through a proximal ileostomy, cause extreme excoriation of the skin, making further application of the appliance difficult. Effluent dermatitis causes marked erythema and desquamation and may encourage secondary infection. Treatment involves careful cleaning of skin, washing with water and drying with tissues or a hair dryer. Any furrows in the skin may be filled with stomahesive paste, and if the granulation tissue surrounding the stoma is grossly distorted, a hydrocolloid base can be constructed to act as a faceplate. When mucocutaneous separation occurs, skin-barrier paste or strips may also be used like caulk to fill in the crevice, separate the absorptive filler from effluent, and provide a flat pouching surface. The ostomy wafer can then be fitted over the wounded area to protect it from effluent, leaving just the stoma uncovered. Excessive drainage may require frequent changing of the pouching system to exchange the absorptive material and assess healing [4]. A 2-piece appliance may allow easier access to the wound for frequent assessments.

As this procedure is done, the ileostomy may have to be occluded with a stomach patch or cap or even a catheter balloon [5]. If the ileostomy contents are very liquid, it is advisable to prescribe antidiarrhoeals.

In a dermatitic skin, the application of any appliance becomes very difficult, more so with single piece appliances,

as they require frequent changes. Ill fitting appliance will allow the effluent to flow below the wafer and injure the skin. Under the above context, a special ileostomy appliance needs to be tailored to the individual need. This is designed with supportive belts to maintain the appliance in place, and the injured skin is treated with medicated pads till healing takes place.

Diaper ileostomy appliance is a good arrangement in accelerating healing of extreme skin excoriations in badly sited ileostomies.

References

1. Phillips R, Pringle W, Evans C, et al. (1985) Analysis of a hospital based stomatherpay services. *Ann R Coll Surg Engl* 67:37–40
2. Gooszen AW, Geelkerken RH, Hermans J, et al. (2000) Quality of life with temporary stoma. *Dis Colon Rectum*;43:650–655
3. Leong APK, Londono-Schimmer EE, Phillips RKS, et al. (1994) Life-table analysis of stomal complications following ileostomy. *Br J Surg* 81:727–729
4. Colwell JC (2004) Stomal and peristomal complications. In: Colwell JC, Goldberg MT, Carmel JE, eds. *Fecal and Urinary Diversions: Management Principles*. St Louis, MO: CV Mosby; pp 224–225, 310–314
5. Devlin HB, (1984) Stomas and stoma care. In: Boucher IA, Allan RN, Hodgson H and Keighley MRB (Eds) *Textbook of gastroenterology*, London, Bailliere-Tindall; pp 1009–1021