Stoma appliances and accessories: getting it right for the patient

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Abstract
This article will examine some of the appliances and accessories that can be used to care for a stoma. There are three types of stoma that can be surgically formed and each will be discussed. Furthermore, there will be brief explanations of why stomas might be formed and what the output from each stoma type will be. Complications are associated with stomas, such as sore skin, which is commonly seen within the first few months after the stoma is formed. This important topic is examined and some of the accessories that can be used to treat these issues will be explored. To aid the reader to undertake their own research on the topic, the websites from some of the stoma manufacturers are included. These websites contain more details about appliances, accessories and information for people with a stoma that can be of benefit to nurses too.

Key words: Colostomy ▪ Urostomy ▪ Ileostomy ▪ Stoma appliance ▪ Stoma

There are over 100 000 people in the UK with a stoma (Black, 2009), therefore it is essential for nurses to have an understanding of stomas and suitable stoma appliances. A stoma is the piece of bowel that is exteriorised and brought through the abdominal wall to re-route the passage of faeces or urine. There are three main types of stoma: a colostomy, an ileostomy and a urostomy (Burch, 2008).

To the touch, a stoma is warm and wet, like the mucosa on the inside of the mouth. The stoma in appearance should be red or pink in colour; this is due to the very good blood supply to the bowel. It is important, in the first few days after the stoma is formed, to check that the stoma is red and healthy and that the blood supply is not compromised, which can present as a necrotic (black) stoma. Stomal necrosis is rare but serious and will require urgent surgery if the necrosis is more than superficial.

A stoma can be permanent or temporary. A temporary stoma means that the stoma will usually be in place for three to nine months, but it can be longer than this time period if chemotherapy is needed, for example.

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Colostomy
A colostomy is formed for a variety of reasons, such as rectal cancer, Crohn’s disease, diverticular disease (Black & Hyde, 2005), imperforate anus or—rarely—to treat faecal incontinence. A colostomy is formed from the large bowel or colon. Formed faeces and flatus will pass into the stoma appliance. In general, the colostomy is active between three times a week and three times a day; this is how often the colostomy appliance needs to be replaced.

Ileostomy
An ileostomy is formed for reasons that include ulcerative colitis (Hart, 2011) or a bowel cancer. An ileostomy formed for bowel cancer is often temporary. An ileostomy is formed with a small spout (Cronin, 2012) from the small bowel or ileum. The stoma output will be flatus and faeces; the latter will have a porridge-like consistency and can be corrosive to the skin, due to the digestive enzymes. In general, the ileostomy is active regularly throughout the day, with the appliance needing to be emptied between four and six times daily and replaced every day or two. It should be noted that it is possible to leave the appliance on longer; particularly if a two-piece appliance is used.

When using a two-piece appliance, the adhesive part can be left in situ and the collection part replaced as necessary, in some countries where appliances are self-funded, this can occasionally be several weeks, but in the UK it is usually up to about four days. Some patients change the collection part of the appliance on a daily basis while leaving the flange in situ for longer.

Urostomy
A urostomy is formed for diseases such as bladder cancer or it may be formed to treat interstitial cystitis. A urostomy is usually formed from a short segment of small bowel, it diverts the passage of urine after the bladder is removed. In limited situations, such as for people with multiple sclerosis, the bladder may be left in situ. In appearance, a urostomy is similar to an ileostomy, in that it is formed with a small 25mm spout, to keep the urine away from the skin, reducing the risk of stoma appliance leakage and sore skin around the stoma. There will also be a small amount of mucu passed from the segment of bowel; this is also termed: conduit, giving the name ‘ileal conduit’. A urostomy should continually pass urine. The appliance generally needs to be emptied between four and six times daily and to be replaced every day or two.
Complications
There are a number of complications that can occur for people with stomas (Persson et al, 2010). The main ones that occur after discharge home from hospital are often related to issues with the skin around the stoma, also termed peristomal skin, with sore skin being a commonly reported problem (Williams et al, 2010). Cootam and Richards (2006) state about a third of people with a stoma encounter a problem with their stoma. More specifically, Salvadala (2013) reports the incidence of problems with the skin around the stoma in the first 3 months after the stoma is formed as being 63% (27/43). She states that the most frequent time that the skin becomes sore is between 21 and 40 days after stoma formation. Interestingly, Lindholm et al (2013) report that 45% of patients experience problems with their stoma (although not specifically with the skin) within the first 6 weeks after stoma formation.

The cause of skin irritation has been explained by Salvadala (2013) as the result of moisture and it is commonly considered that the stoma output touching the peristomal skin results in sore skin (Burch, 2014), particularly from an ileostomy or urostomy (Ratcliff et al, 2005). Skin irritation can be the result of an appliance leaking or the hole (aperture) in the stoma appliance being cut too large. A leaking appliance is commonly reported (Porrett et al, 2011). Other causes of sore skin can be skin stripping (Berry et al, 2007), as a result of frequent or rough removal of the stoma appliance. Barel et al (2013) consider a lack of appliance adhesion may be due to a number of causes. Reasons include the appliance overfilling, or not drying the peristomal skin adequately at an appliance change.

Ratcliff (2014) reports most people (87%; 93/107) in her study had a leak of their stoma appliance at some time. Reassuringly, 45% (48/107) did not report that they leaked very often. She also reports that people with an ileostomy or a urostomy are more likely to be troubled with frequent appliance leaks and irritated skin. These results were despite the fact that more people have a colostomy than any other type of stoma. Furthermore, people with appliance leakage are likely to be troubled with sore skin and this can adversely affect their quality of life (Riemer and Nichols, 2009). It has been reported that people with a stoma are concerned with appliance leakage and may be worried about leaving the house (Pittman et al, 2008).

Assessment
When a person with a stoma presents to the nurse with a problem, it is essential to undertake a thorough assessment of the situation prior to planning an intervention (Jemec et al, 2011). There are a variety of tools that can be used to assess problems with the peristomal skin, such as those described by Jemec et al (2011), Martins et al (2010) and Williams et al (2010). The general assessment process needs to include questioning the patient about the problem, choosing a treatment, using the intervention and evaluating the results. Although any nurse can undertake this process, the stoma specialist nurse has a greater understanding of the treatment opinions such as the use of stoma accessories. Unfortunately, there is very little research to guide nurses on the treatment of problems, with most articles on the topic being opinion articles written by stoma specialist nurses. These article despite a lack of robust research data, are proven in practice to be effective. It should be noted that stoma appliance and accessories are expensive (Boyles, 2010), but when using following an assessment the addition of a stoma accessory will prevent problems from occurring or resolve issues that might have arisen.

Appliances
Each type of stoma will require a different stoma appliance. The three main appliance types are: closed (used for people with a colostomy); drainable, with a tap or bung (used for people with a urostomy); and drainable appliance closed with Velcro-type fastening (used for people with a ileostomy) (Black, 2011). Stoma appliances are made by a variety of different manufacturers (see Table 1). A stoma appliance is used to collect and contain the stoma output.

A stoma appliance is formed from two parts: the adhesive part and the collection part. The former is termed a flange base plate or face plate. The latter is termed a pouch or bag. There are one-piece and two-piece appliances available. One-piece appliance has the flange and bag joined, whereas a two-piece appliance is in two parts. The latter were joined in the older type of appliances by two clipping rings and are modern two-piece appliances the two parts are joined by specialist adhesive.

Most flanges are flat, but some are shaped to press into the abdominal wall around the stoma. These shaped flanges are called convex flanges or may be known as convexity. The reason that a convex flange might be used is if the stoma is flush to the skin or below the level of the skin (retracted). The convex shape pushes into the skin around the stoma and this pushes the stoma out (Redmond et al, 2009); reducing the risk of the stoma output creeping under the stoma flange and causing an appliance leak or sore skin from occurring. However, the skin should be checked to ensure that the convexity does not cause damage, such as bruising or worse skin erosion and ulceration. Skin damage as a result of using convexity can occur at any time, but extra care needs to be taken in the first few weeks after the stoma is formed to prevent damage to the newly formed join between the abdominal wall and the stoma.

Stoma appliances are available as clear or opaque. Clear appliances are useful in the first few days after a stoma is formed. This helps to enable the patient and the members of the multidisciplinary team to see the stoma and the stoma output. In the UK, most people prefer to have the contents of the stoma appliance covered with an opaque appliance to disguise the faeces. Furthermore, there is a variety of diverst stoma appliance sizes: small, medium and large. The appliance size can be the choice of the ostomate, but no appliance should be left to overfill, as it is more likely to leak.

For the person with a colostomy, with a formed stool that may be active once or twice daily, it is possible to undertake colostomy irrigation and wear a small stoma cap (Readhead 2006). Colostomy irrigation is the instillation of warm tap water through the colostomy, to wash out the distal colon of faeces and flatus, so that there will be no further passage
of faeces for at least 24 hours. A stoma cap is simply a small circular or square appliance that cannot contain faeces, as it is too small, but it keeps the stoma covered so that it does not mark clothes. Irrigating a stoma for some patients with a colostomy can assist with body image or sexual relations.

Some appliance manufacturers also produce a colostomy bag that can be disposed of in the toilet. Toilet-disposable colostomy appliances can be useful if the stoma is active when the person is away from home, as appliances can be difficult to dispose of in unfamiliar situations.

There are many stoma appliance and accessory manufacturers (see Table 1) and company websites can act as a guide for the nurse and patient in the use of stoma appliances and accessories. However, it should be noted that if a problem occurs it is ideal for a stoma specialist nurse to review the patient to make a full assessment, as they have an in-depth understanding of stoma products and the issues related to stomas. In general, any of the various appropriate appliances can be used by most people with a stoma — also termed ostomates, or ostomists. This is because very rarely (0.6%) are people allergic to stoma appliances (Lyon and Smith, 2010). Patients may be able to attend meetings where stoma manufacturers display their products, or the stoma specialist nurse can be contacted for further advice.

Accessories

There are stoma accessories available for a variety of different reasons to assist with the care of the stoma. Stoma accessories can be used to resolve problems with the stoma, such as issues with the appliance adhering, problems removing the appliance or sore skin, for example. Stoma accessories are commonly used: Herlufsen et al (2006) state about half of people with a stoma use a stoma accessory.

Accessories that are used to help the stoma appliance adhere to the abdominal wall include adhesive paste and stoma seals. These stoma accessories mould with the skin to help adhesion. Alternatively, paste and/or seals can be used to fill small creases or skin dips in the abdominal wall (Dietz and Gates, 2010), as the skin around the stoma needs to be flat to enable the flange to securely adhere to the body.

It should be noted that paste often contains alcohol and using paste on broken or eroded skin will result in discomfort and stinging. Some seals need to be stretched to fit around the stoma, others are pre-sized or alternative the seal can be broken up and used in small segments that can be rolled or shaped to fit around the stoma, as necessary. Furthermore some seals are convex shaped and can be used in conjunction with a flat stoma flange for retracted or flat stomas to prevent the appliance leaking.

If the skin is becoming sore as a result of skin stripping on removal of the appliance, an adhesive remover spray or wipe might be necessary (Black, 2014). The adhesive remover helps to dissolve the adhesive part of flange, so that it can be easily removed without causing skin damage. The skin will still need to be cleaned after the appliance is removed with the adhesive remover.

If skin does become broken, stoma powder can be used to help dry the skin and allow the stoma appliance to adhere (Bartle et al, 2013). It should be noted that stoma powder should be used minimally as too much powder will actually stop the stoma appliance from adhering (Williams, 2010). When using stoma powder, it should be applied to the broken, wet skin after the area has been thoroughly cleaned and dabbed as dry as possible. A cool hairdryer may be more comfortable than using cloths or gauze to dry the skin. Shaking of powder should be applied to the wet skin at any excess powder dusted off before applying the stoma bag.

If the skin is at risk of becoming sore, for example, elderly skin that is fragile, then the use of a barrier film might be beneficial (Black, 2014). There is a variety of terms used to describe this product, including barrier spray, protective wipe and protective barrier film (Rudoni and Denn, 2009). A barrier film will provide a thin barrier to protect the peristomal skin from the stoma output (Thompson et al, 2011). However, if the skin is at risk of breakdown but is also dry, then a small amount of barrier cream can be used. Cream should be used with caution, as if it is greasy it will not allow the stoma appliance to adhere to the abdominal wall. Any excess residual cream should be wiped away.

An example from practice highlights how using a stoma accessory resolved a stoma problem. A patient requested a review by the stoma specialist nurse, reporting a leak in the appliance. She had an ileostomy formed for ulcerative colitis 10 years ago. She had recently lost weight as a result of being on a diet and the leaks had become frequent since losing weight. She used to change the appliance once daily but in the previous 2 weeks she had used a whole box of stoma appliances (30 bags) and was concerned that it would run out of products. She had tried no treatment but was losing confidence and was worried about leaving the house. On examination, the skin around the stoma was red and oozing in places. After assessment, it was decided to use powder on the oozing skin. It was also noted that the faeces were more liquid than usual. In addition, the appliance was being emptied 8–12 times daily, compared to her usual routine, which was 6–8 appliance emptyings per day. Her diet was examined, which revealed that her stoma output was being adversely affected due to dietary change. This was addressed by giving dietary advice (Cronin, 2012).
To security, we’ve added comfort

The lady was telephoned the next week and her ileostomy output had thickened as a result of further dietary changes. Her stoma had stopped leaking and the skin was healed; use of powder was therefore discontinued. More importantly, she had regained her confidence. In this situation, consideration should also be given to exclude an infective cause for the increased stoma output if problems persist.

Conclusion

There are many different stoma appliances, so it can be difficult to understand which may be the most suitable for the ostomate. In general, most people with a stoma are able to wear any of the appliances that are appropriate to the type of stoma that they have; an allergy to a stoma appliance is rare. Appliances are manufactured in various shapes and sizes with different components used, which is useful to allow for different skin types and needs of the ostomate. In addition, if a complication occurs with a stoma, there are a number of accessories that can be used to resolve the issue, including stoma powder, seals and barrier films. However, it is essential to undertake a thorough assessment—and a review by the stoma specialist nurse is ideal.

Conflict of interest: none


KEY POINTS

- There are many appliances and accessories that can be used to assist people with stomas.
- A colostomy will require a closed appliance to collect and contain the faeces.
- An ileostomy appliance is drainable and may often be fastened by a Velcro-type fastening.
- A urostomy appliance is fastened with a tap or bung and an additional night drainage bag may be used.
- Stoma specialist nurses are an invaluable source of support and knowledge.

References:


