



# Skin problems associated with ileostomies and ileo-anal pouches

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Ileostomies and ileo-anal pouches are usually constructed when it is necessary to remove, or bypass, most or all of a diseased large intestine. An ileostomy is made by bringing the terminal ileum (the final part of the small intestine) through an incision in the abdominal wall, usually on the lower right-hand side of the abdomen, to form a 'stoma' which ideally should have a spout about 1" long.

Because the bowel contents (faeces) are still semi-fluid at this stage in the intestinal tract and as drainage is not under voluntary control, it is necessary to have an apparatus which not only collects this waste material, but at the same time protects the surrounding skin. However, an operation has now been developed where the residual undiseased small intestine is folded into a pouch and then joined directly to the top end of the canal leading to the anus. The aim is to achieve voluntary control of defaecation which can be performed in the normal manner with no requirement for a collecting bag.

Skin disorders fall into three main groups. Firstly, there are those due to the direct damaging effect of the draining intestinal contents; secondly, there are problems relating to the collecting appliance; and, thirdly, there are problems arising from other skin conditions developing in the surrounding area.

## Direct damage from intestinal content

### Ileostomy

The semi-fluid faeces from an ileostomy contain not only unabsorbed waste products, but are also alkaline with enzymes which can dissolve protein (including protein in the skin). Skin does not tolerate prolonged contact with these substances and reacts by becoming inflamed, red, sore or itchy and, in more severe cases, it may weep or even break down completely to leave an open sore area, known as an ulcer.

It is, therefore, important that a collecting system is devised which will minimise contact of the skin with the fluid faeces, as well as preventing any leakage outside the system. This is done by having a bag held onto the skin in the area around the stoma by an adhesive system.

There are two possible arrangements: either a one-piece system in which the bag has a built-in adhesive patch, or alternatively a two-piece system in which the adhesive patch has a flange on the outside, onto which the ileostomy bag can be attached and from which it can be removed. The bags can usually be emptied without

being completely removed from the body.

The vast majority of collecting systems now incorporate a flexible protective wafer which sticks to the surrounding skin, having been cut to fit around the stoma. The bag is then attached to the wafer, either directly or by an incorporated flange. The wafers can be used over damaged skin. If necessary, a barrier paste can also be applied directly to the skin immediately around the stoma, where it can be moulded into shape as well as filling any depressions in the skin nearby. There are a wide variety of systems based on this principle and these are marketed by many different manufacturers. There is no 'right' or 'wrong' system. The right arrangement is the one which suits the individual best.

Preventative measures are of prime importance if skin damage from faeces is to be avoided. Ideally, these should start before the operation, with an explanation of the surgical procedure, its consequences, and emphasis on the importance of skin care. (This is, of course, impossible for those undergoing emergency surgery.) The patient can be acquainted with the range of ileostomy equipment available and gain experience in prolonged wearing and changing of the various appliances before deciding on a particular one. The support and help of the stoma care nurse is invaluable in this context.

The appliance is normally changed at any time between 3-7 days, according to individual circumstances.

More frequent changing is inadvisable, as each time this is done there is likely to be some minor damage to the skin as the adhesive is peeled away, with insufficient time for the skin to repair itself before the next change. However, an immediate change of appliance is most important if any leakage is observed. The old appliance should be removed with care by gently peeling it away from the skin. Cleaning the skin during the change only requires tissues or gauze squares and tepid water.

Strong or perfumed soap and, in general, strong antiseptic solutions should not be used as they may irritate the skin. Alcohol and spirits should not be used for cleaning, as not only may they be irritant and sting, but also they remove the skin's natural protective grease. The skin should be dried by dabbing gently and not by strong rubbing.

When a barrier preparation is used, it must be rubbed in thoroughly and any excess removed as otherwise it may interfere with the adhesion of the bag or flange to the skin. The correct size of appliance is most important and the stoma size needs to be regularly checked as it may change periodically, particularly after an operation when there may be some initial shrinkage. This check is usually done with a stoma measuring card with pre-cut holes. There should be approximately 1/8" clearance all round the stoma. Sitting in a low chair is inadvisable during the application, as creases tend to occur on the skin making it difficult to ensure a leak-free fit. It may be better to stand in a

normal upright position or to lean back on the edge of a high stool or piece of furniture.

There may be times when the faeces increase in volume and become watery, making seepage between the skin and adhesive more likely, with consequent damage to the skin. This may be due to a variety of reasons - for example, gastroenteritis, inflammation of the bowel and stress. A change in diet is unlikely to be effective in reducing this fluidity unless the person with the ileostomy is certain that a particular food is responsible. It is essential that the fluid intake is increased if copious amounts of watery faeces occur and medical advice may need to be sought. Drugs may need to be prescribed to bring the condition under control.

Once inflammation of the skin becomes established, this in itself will interfere with adhesion of the ileostomy apparatus to the skin, creating a vicious circle which leads to greater likelihood of further leakage. Consequently, advice should be sought at an early stage when the skin problems arise. Poor condition of the skin may be worsened by a system which uses a strong adhesive directly on the skin, and at the same time weak adhesion may result in a greater likelihood of seepage between the adhesive and the skin. In these circumstances, it is often a matter of trial and error, using alternative systems until the most suitable one is found.

If there is a history of consistent leakage from one or two points around the bag, then this suggests the presence

of a gully due to an operation scar or from skin folds. This is a particular problem in those who have put on weight following the operation and such gullies may be seen most easily when the person is sitting without an appliance. A defect can be filled by using karaya paste or one of the proprietary pastes. A wafer can be placed over the top before a suitable bag is applied. A belt can be worn to produce firmer pressure, thereby reducing the potential for leaks.

Medical treatment may be necessary to settle skin inflammation and often a preparation which has to be rubbed into the affected area will be prescribed.

Medicaments to apply to the skin are made of a base and an active ingredient. Greasy bases, such as ointments and oily creams, are unsuitable to apply to the affected area, as they interfere with the adhesion of the bag or wafer to the skin.

Medicament with liquid bases (sprays and lotions) or gels or vanishing cream bases are, therefore, necessary, any excess being removed after the material has been well rubbed in. Adhesion may be assisted by a belt if there is any difficulty.

Sprays and lotions with a spirit or alcohol base may not always be suitable as they can sting and remove the body's natural grease barrier. Sometimes bland, soothing preparations, but more usually a steroid/antibacterial preparation, will be prescribed to suppress the inflammation. Strong steroid preparations can have untoward effects on the skin if used for long periods.

However, hydrocortisone (up to 1%) preparations are usually safe in this respect.

If the skin breaks down completely to produce an ulcer, then it can be covered with a wafer while it heals. Bland lotions or creams can be applied to an ulcer and, if it is small in area, zinc oxide paste can be used, but it should not be used if it interferes with the adhesion of the wafer. If the ulcer is infected, an antibacterial cream or lotion will need to be applied and, in the rare event of there being a spreading infection involving the skin beyond the ulcer, then an antibiotic by mouth may be necessary. In general, steroid medicaments should not be applied to ulcers as they interfere with healing.

### Ileo-anal pouches

Construction of this type of pouch should result in voluntary control of defaecation via the anus. The semi-solid or fluid nature of the faeces and its quantity will mean 5-10 evacuations, even in a normal day. Furthermore, there is a risk of seepage in between times. It has already been explained that fluid from the small intestine damages the skin and clearly the skin around the anus (or perianal skin) is at risk of being inflamed, damaged and sore due to frequent or more prolonged contact with this. The situation might be further complicated if wearing a pad is necessary. For some individuals, the pad can act as a poultice soaking up the intestinal contents and holding them against the perianal skin, thereby producing more inflammation.

It is, therefore, most important that, right from the start, an inert barrier cream or paste is used after each and every defaecation. As previously indicated, alcohol, strong or perfumed soaps and antiseptics may damage the skin in their own right. It is again advised that wiping is done gently with gauze squares and tepid water or saline with gentle dabbing and no intense rubbing to dry the area.

The perianal skin does, furthermore, have an unusual susceptibility to developing allergic reactions due to contact with materials used in this site, especially perfumes and components of medicaments and cleaning materials. It is for this reason that we feel unperfumed products are to be preferred, as fragrances are not essential and are one of the more common causes of contact allergy. Furthermore, some lotions and creams, especially those containing anaesthetics, antihistamines and neomycin are renowned for their ability to induce contact allergy and it is for this reason that they are not to be recommended. However, allergy can develop to even the simplest of materials, including components of barrier creams, cleansers, medicated wipes and medicaments.

Persistent inflammation in the perianal area is an indication for consideration of referral to a dermatologist with a view to patch tests, which are described later.

Skin disorders in this site will require treatment. In this instance, an ointment may be preferable, as it will additionally serve as a barrier helping to

prevent penetration of fluid materials. The most effective anti-inflammatory medicaments will contain a steroid. It is important to understand that there are strong steroid preparations which are inappropriate to use in the perianal area for longer than a few days. Weaker preparations such as a 1% hydrocortisone, can be used with safety on a regular once-or-twice daily basis without usually putting the skin of the individual at risk to thinning. There is often an unnecessary fear about using even this strength of steroid medicament. It must be remembered that they are unparalleled in their ability to control inflammation and may make the difference between intolerable discomfort and being without any symptoms at all.

### **Problems relating to the ileostomy apparatus**

Great care is taken by the makers of ileostomy equipment to ensure that the various components are made of materials which will not irritate the skin. Occasionally, the skin reacts poorly to being continually covered, either by adhesive area of the system or under the bag where it lies in contact with the skin. Itchy red spots may develop under these areas due to damage or blockage of the ducts leading from the sweat glands. If this occurs then alternative appliances and adhesive should be tried. A cotton cover on the bag should prevent any rash under the area where it is in direct contact with the skin.

Physical fitness is important to many people with ileostomies and jogging is a particularly

popular pursuit. Inevitably, this puts an individual at a risk to chafing of the skin by the equipment, but any resulting soreness and bleeding should settle with a few days' rest. Prevention is not always possible, but experimentation with different types of apparatus is worthwhile and it is important that the person running wears a cotton cover over the bag. Persistent bleeding or ulceration of the skin around the stoma requires medical assessment by a doctor.

Another problem relates to the damage of the hair follicles of the skin, particularly in those with a heavy growth in this area. This usually arises when the hairs are pulled out by the adhesive on removing the appliance. In such cases, an alternative arrangement with a weaker adhesion can be tried. If this is unsatisfactory, then the use of an adhesive remover, which can be applied between the skin and the adhesive faceplate, one drop at a time, while gently removing the bag, should be considered. The regular use of an electric razor will keep the area closely shaved and is less damaging to the skin surface than a safety razor. This should be done no more than weekly. Shaving is best done in the evening as the skin tends to swell slightly due to the fluid retention during sleeping hours and, if shaving takes place soon after waking, it is likely that the hairs will again become prominent in a few hours as the swelling goes down. Depilatory creams can be quite irritable to the skin and are probably best avoided.

The problems of allergic contact reactions to the equipment is, fortunately, uncommon these days, particularly as there is greater awareness by the manufacturers of ileostomy appliances, adhesives, etc. of the need to avoid materials which are likely to cause such reactions. The rash starts in those areas where there is direct contact by the skin with the causative material, but it can become more widespread and, in rare cases, involve much of the body. There is a common, wrongly-held, belief that allergic reactions can only occur to a newly-encountered material. This is not so and allergy from materials in contact with the skin can occur after they have been used for many years with no previous symptoms.

Any part of the apparatus or other materials used on the skin may induce an allergic reaction, but allergic reactions from adhesives and barrier components are becoming much less common as new materials are developed. The ingredients of many medicaments made to apply to the skin are capable of producing allergic contact rashes, although they may well have been prescribed for a different rash in the first place.

Awareness of this possibility is important, particularly where the medicament contains neomycin, framycetin or a local anaesthetic ('...caines'). However, there are a considerable number of other materials in medicaments and preparations used on the skin and many of these have the potential to produce an allergic

reaction. In our experience fragrances in deodorizers, or possibly creams, are the most likely cause of any allergic reactions.

### Diagnosis of contact allergy

Accurate diagnosis of allergic contact reactions normally requires a special investigation known as patch-testing, which is usually performed in a standardised fashion by a dermatologist.

In addition to a standard set of tests, all materials used on the skin need to be tested, including any lotions, creams, sprays, ointments, pastes and special dressings. All parts of the ileostomy apparatus also need to be tested, particularly the adhesive materials, but also every different piece of the flange and bag, as well as any other material used on the skin. This includes adhesive tapes and plasters, adhesive removers, foam pads, wafers, karaya, other leak preventative materials, deodorants, belts and bag covers.

If a person with an ileostomy or ileo-anal pouch is required to attend a patch test clinic, then it is important that he or she takes all these materials for testing if used.

Once allergy is demonstrated, then removal of the offending cause(s) will be necessary on a permanent basis.

### Other skin problems

Eczema is a particularly common skin disease. It may be widespread and hence involve the peristomal and perianal areas. There are many different causes of, and

patterns to, eczematous rashes. However, there does not appear to be a particular tendency for them to affect the area around the stoma, unless they are secondary to the direct irritant effect of the intestinal contents or a manifestation of contact allergy as discussed previously. Treatments for eczematous conditions often involve use of a steroid medicament on the skin combined with an anti-bacterial or anti-fungal if there is secondary infection.

Psoriasis is a common non-infective condition of the skin, but it can be widespread and may be a particular problem around the stoma and perianally, especially if there is associated skin damage from leakage. It is, therefore, most important in psoriatic subjects to find a system which will keep this to a minimum. Psoriasis may be particularly difficult to treat in these sites as many of the standard treatments, such as tar and dithranol, are less likely to be tolerated on the skin. Strong steroid preparations may help but their side effects on the skin, particularly thinning with prolonged usage, can be a problem and psoriasis can become resistant to this form of treatment and may flare on stopping them.

Weaker topical steroids such as 1% hydrocortisone can be used to treat psoriasis in the body folds, including around the anus. Vitamin D analogues such as calcipotriol may have a role, although they are not always well tolerated under a wafer or in the body folds. Often a bland preparation may be sufficient

to help. Ultra-violet light therapy is effective and usually well tolerated. To protect the stoma whilst in the treatment area patients can cover it with a cardboard tube (toilet roll inner) with gauze packed in the end to contain leaks. In difficult cases, local x-ray treatment has been used.

Primary skin infections do not usually occur around the stoma unless there is associated damage or ulceration of the skin. Superficial, bacterial infections can usually be treated with anti-bacterial creams and lotions, but occasionally an antibiotic by mouth may be necessary with deeper spreading infections. Fungal infections are seen on occasions both around the stoma and in the body folds and these normally respond to anti-fungal preparations applied to the skin, but in resistant cases there are effective drugs available which can be taken by mouth with little likelihood of upsetting ileostomy function.

As pointed out already, medicaments applied to the skin underneath wafers have to be in a lotion or gel base, as creams and ointments interfere with adhesion of the wafer to the skin.

### Conclusion

Skin problems are now fortunately less common than they used to be. Much of the improvement relates to development of more practical and efficient ileostomy equipment and materials, particularly with regard to preventing leakage and their safety and acceptability to the skin.

Most large centres have a trained stoma care nurse, skilled in dealing with a wide variety of ileostomy problems, including those of appliance usage, prevention of leakage and care of the skin. It is important that everyone with an ileostomy knows where they can be contacted and seen for advice. Additionally, there are established members of IA who are always willing to give basic help and advice where this is necessary.

Despite all the advances and available help, difficult skin problems are bound to arise from time to time. If this occurs, then referral to a dermatologist with a view to further advice and investigation where necessary, may be required.

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