Nursing assessment to inform and rationalise clinical decision making

A thorough nursing assessment is essential to consider a convolution product. It is not uncommon for patients to have one of the clinical scenarios listed in Table 1, but to have healthy skin and to be leakage free. The clinical scenario listed does not automatically make a convolution product is required. Careful assessment and history taking should inform your management in conjunction with clinical observation. The patient’s abdomen should be assessed for firmness, ridging and bulging. The patient’s skin should be examined for redness, erosion and raised nodules. The optimal stoma output and condition of the peristomal skin to allow your assessment of the patient consider the following questions:

- Is the area around the stoma – regular, irregular, outset?
- If the area is outset, is the area irregular and variable?
- Is the abdomen soft or firm?
- Are there superficial or deep creases around the area?
- Is the stoma flush with the skin level, protruding or retracted?
- Are there any superficial or deep creases around the area?
- A standardized history and assessment tool is available for use on the enclosed pad

Products and accessories

There are a variety of options available to produce a degree of convolution. These are outlined in Table 1.

- A one-piece, flat appliance, with a flexible and mouldable adhesive may be all that is required to provide security and prevent leakage in those with thin creases (McKenzie 2001).
- A stoma paste can be used to create a level pouching area and then a flat appliance can be used to support it (Gardner et al. 1992).
- A one-piece, flat appliance, with a flexible and mouldable adhesive may be all that is required to provide security and prevent leakage in those with thin creases (Gardner et al. 1992).
- A standardized history and assessment tool is available for use on the enclosed pad

What pressure do convolution products place on the peristomal skin?

There is no evidence of published studies from product development which identify skin pressure parameters. What we do know is that light convexity may reduce shear force and reduce the impact of the stoma appliance on the skin (Hampton and Bryant 1992). A belt can provide added support to the appliance and help reduce pressure (McKenzie 2001).

Conclusion

Not all patients require a convolution product but those who do, a thorough assessment is required. For many, the addition of a seal or paste will be enough to ensure a secure and comfortable seal. Others may require pouches with an integral convexity and may also require a belt (although many patients appear to dislike wearing these). The guidance and decision making algorithms use best evidence and best practice recommendations and are best supported by a clinical trial which would inform and rationalise clinical decision making but is not a right prescription for care. Each patient will require individual assessment and evaluation using the principles outlined in this guide.

References

British Journal of Surgery, 97:1185 – 1189

3 steps to stoma assessment:

1. Assess body type
2. Define stoma type
3. Select solution
Dilemmas of choice around convexity and accessory usage in clinical scenarios

Background: The incidence and evidence surrounding stoma complications

This guide explores the rationale for the use of convexity in the management of clinical stomal scenarios, identifies the potential complications associated with convexity usage and presents the best available evidence to guide clinical decision making.

There are 132,000 people living with a stoma in the UK, with an additional 21,000 new stoma patients per annum (High Impact Actions for Stoma Care 2010). In addition to the known physical, psychological and social implications following stoma formation surgery, long-term stoma complications have been reported in up to 54% of colectomates, and 35% of ileostomates and anastomotic strictures experience is reported in up to 34% of colectomates, and 20% of ileostomates, or the stoma develops anastomotic strictures. We have evidence to support our daily clinical observations – that stomal complications are prevalent and are associated with considerable mortality (Naeth et al 2010). In daily practice this means that many of our patients will have stomal complications and require expert advice and may need to use accessory products or integral convex products in order to achieve a secure, leak-free daily-life.

We have evidence to support our daily clinical observations – that stomal complications are prevalent and are associated with considerable mortality (Naeth et al 2010). In daily practice this means that many of our patients will have stomal complications and require expert advice and may need to use accessory products or integral convex products in order to achieve a secure, leak-free daily-life.

Flash stoma

The optimum length of an ileostomy spout is considered to be around 2.5 cms, an accessory would be considered flash when it is level with the abdominal skin (Hampson & Burt 1990).

Soft abdominal surface

Stoma opening near or at skin creases/wrinkles/scarring

Peristomal skin

Telescoping stoma

Retracted stoma

Flush stoma

The optimum length of an ileostomy spout is considered to be around 2.5 cms, an accessory would be considered flash when it is level with the abdominal skin (Hampson & Burt 1990)

Short spouted ileostomies, less than 2.5 cms, can also cause management problems although not entirely flash. A colostomy with a small spout is associated with less post-operative complications (Gibbard et al 2007, 2011) and therefore a flush colostomy may cause management issues for some individuals.

Retracted stoma

The skin around the stoma is likely to be soft and under tension and may be pulled back into the abdomen (McKenzie & Ingram 2001).

Causing effluent to leak under flange.

Skin which tips or protrudes the stoma up or makes it protrude more

Skin which tips or protrudes the stoma up or makes it protrude more

Skin that cannot form channel gullies which leakage can occur. Variable peristomal skin contours can form tips above or below the stoma and are caused by tension around the stoma or because of scars proximally to the abdominal wound

Stoma opening near or at skin level

Soft abdominal surface

An abstraction with poor mucosa tone provides little support for the stoma. This clinical scenario is included in all of the other clinical guides and so is not discussed separately.

Table 1. When might a convexity product be indicated?

<p>| Pressure do convexity products place on the peristomal skin? | Soft convexity integral to pouch. | Integral convexity or flat flexible and elastic barrier with ring and belt. | Integral flange convexity or flat flexible and elastic barrier with ring and belt. |</p>
<table>
<thead>
<tr>
<th>Degree of convexity</th>
<th>Effect</th>
<th>Products type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat</td>
<td>little pressure to skin.</td>
<td>Flat flexible and elastic barrier, may be supplemented with paste or ring.</td>
</tr>
<tr>
<td>Light</td>
<td>up to 1mm convexity</td>
<td>Moderate tension/pressure on the skin, fills shallow gullies and tips the stoma up or makes it protrude slightly.</td>
</tr>
<tr>
<td>Soft</td>
<td>up to 3mm convexity</td>
<td>Causes noticeable pressure on the skin. Fills minor gullies or flattens small creases but will not alter external peristomal tension.</td>
</tr>
<tr>
<td>Integral</td>
<td>up to 5mm convexity</td>
<td>Overlies stoma, provides pressure to skin. Integral flange convexity or flat flexible and elastic barrier with ring and belt.</td>
</tr>
</tbody>
</table>

What is the purpose of convexity?

• Selection of suitable convexity for an individual should result in increased wear time, prevent leakage, improve peristomal skin integrity and be more cost effective (HOSCN 1998, 2007).
• Convexity products can be integrated into the barrier of the appliance or can be added to flat barriers (rings, seals, pastes).
• Convex products cause a degree of protrusion of the stoma, provide better tension to the skin around the stoma and flatten peristomal skin contours (Hogdall 2010).
• The aim of convexity is to increase protrusion of the stoma above the surrounding skin level, to achieve a leak free seal and enhance a patient’s quality of life (Cronin 2008).

What are potential problems caused by convexity usage?

In clinical practice, we now have a large range of convexity products which offer different levels of convexity, and this range of convexity options can lead to confusion about what might be suitable for an individual patient.

Mucocutaneous separation

There is no clinical evidence of mucocutaneous separation occurring from convex product usage, there is a suggested risk of mucocutaneous separation occurring if convexly used is used within the first week following stoma formation (Boisset & Borrani 1999, Cronin 2008).

Granulomas

Can be caused as a result of friction from an ill fitting appliance which rubs against the stoma. Therefore it is reasonable to assume that convex products may also cause friction and therefore granulomas (Cronin 2008).

Accumulate peristomal skin pressure

Lociated off the skin edge, the area (discomfort). This can be painful and may lead to ischemia of the skin, a long term use of convex product can cause irreversible pigment skin changes, pustulara and desquamation of the skin. The peristomal skin takes on the shape and width of the convex flange. This can create further management problems as this defect will always require building up or filling in (Cronin 2008). Amendol evidence from nurse suggested views, when these are often caused by the belt attachment, not the convex product. |
Dilemmas of choice around convexity and accessory usage in clinical scenarios

Background: The incidence and evidence surrounding stoma complications

This guide explores the rationale for the use of convexity in the management of clinical stomal scenarios, identifies the potential complications associated with convexity usage and prevents the best available evidence to guide clinical decision making.

There are 102,000 people living with a stoma in the UK, with an additional 21,000 new stoma patients per annum (High Impact Actions for Stoma Care 2010). In addition to the known physical, psychological and social implications following stoma formation surgery, long-term stoma complications have been reported in up to 20% of colostomates, and 33% of ileostomates and anastomosis self-experience is impaired in up to 33% of patients (McKenzie & Ingram 2001).

Effect on the patient

Person’s self-management and adaptation, as well as leading to repeated hospitalization for treatment (Hoeflok 2010). We have evidence to support our daily clinical observations – that stomal complications are prevalent and are associated with considerable mortality (Nastro et al 2010). In daily practice this means that many of our patients will have stomal complications and require expert advice and may need to use accessory products or integral convex products in order to achieve a secure, leak-free daily life.

Plaf stoma

The optimum length of an ileostomy spout is considered to be around 2.5 cm. This would be considered flush when it is level with the abdominal skin. The Hampton and Butler (1982) Short spouted ileostomy, less than 2.5 cm, can also cause management problems although not entirely flush. A colostomy with a small spout is associated with less post-operative complications (Gott et al 2007, 2011) and therefore is flush ostomy may cause management issues for some individuals.

Retracted stoma

The stoma is below skin level, retraction means the stoma is under tension and is pulled back into the abdomen (Moffatt & Ingram 2001). Morbidity causes night time problems, when the patient is supine the stoma slides back to skin level or below.

Telescoping stoma

Small stoma cannot fill shallow gullies so when leakage can occur. Variable peristomal skin contours can form tips above or below the stoma and are caused by tension around the stoma or because of slopes proximally to the abdominal wound.

Stoma protrusion near or above skin level

Causing effluent to leak under flange.

Soft abdominal surface

Anabolism with poor muscle tone provide little support for the stoma. This clinical scenario is included in all of the other clinical guides and is not discussed separately.

Table 1. When might a convexity product be indicated?

<table>
<thead>
<tr>
<th>Degree of convexity</th>
<th>Effect</th>
<th>Product type</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 up to 3mm convexity</td>
<td>Skin may adhere or rejection pressure on this skin.</td>
<td>Soft and integral flange, may be supplemented with paste or ring.</td>
</tr>
<tr>
<td>Light up to 3mm convexity</td>
<td>Moderate tension pressure on the skin, fills shallow gullies and tips the stomal protrusion up or makes it protrude.</td>
<td>Integral flange convexity or flat flexible and elastic barrier with ring and belt.</td>
</tr>
<tr>
<td>Deep up to 3mm convexity</td>
<td>Places significant tension on the skin which tips or protrudes this stoma and fills deep gullies and skin creases.</td>
<td>Integral flange convexity.</td>
</tr>
</tbody>
</table>

Potential problems caused by convexity usage

In clinical practice, we now have a large range of convexity products which offer different levels of convexity, and this range of convexity options can lead to confusion about what might be suitable for an individual patient.

Mucocutaneous separation

There is no clinical evidence of mucocutaneous separation occurring from convex product usage, there is a suggested risk of mucocutaneous separation occurring if convex is used within the first week following stoma formation (Roelst & Boarini 1998, Cronin 2008).

Granulomas

Can be caused as a result of friction from an ill fitting appliance which rubs against the stoma. Therefore it is reasonable to assume that convex products may also cause friction and therefore granulomas (Cronin 2008).

Accumulaciom peristomal skin pressure

Located outside the entry opening of the stoma, accumulation of effluent can lead to skin breakdown and swelling, the continued and long-term use of a convex product can cause irreversible pigmented skin changes, pyoderma and overstretching of the skin. The peristomal skin takes on the shape and width of the convex flange. This can create further management problems as this defect will always require building up or filling in (Cronin 2008). Accumulation of effluent from nursing ripped stoms, when worn, are often caused by the ball attachment, not the convex product.
Nursing assessment to inform and rationalise clinical decision making

A thorough nursing assessment is essential in consideration of convexity products. It is not uncommon for patients to have one of the clinical scenarios listed in Table 2, but to have healthy skin and to be leakage free. The clinical scenario alone does not automatically make a convex product is required. Careful assessment and history taking should inform your management in conjunction with clinical observation. The patient’s abdomen should be assessed in the lying, sitting and standing position and rules made of the consistency/variation of the stomal output and condition of the peristomal skin. To aid your assessment of the patient consider the following questions:

- Is the area around the stoma – regular, inward, outward?
- If the stoma is inward, is the inward area uniform or variable?
- Is the abdomen soft or firm?
- Are there superficial or deep creases around the stoma?
- Is the stoma flush with the skin level, protruding or retracted?
- A standardized history and assessment tool is available for use on the enclosed pad.

Products and accessories

There are a variety of options available to produce a degree of convexity. These are outlined in Table 1.

- A one piece, flat appliance, with a flexible and mouldable adhesive may be all that is required to provide security and prevent leakage if there is no skin creasing (Metcalf 2001).
- A stoma paste can be used to create a level pouching area and then a flat appliance can be used (Hampton and Bryant 1992).
- Ringe can be used to fill in or provide a degree of convexity around a stoma which has an opening near or at skin level. A belt can provide added support (Hampton and Bryant 1992) and provide a degree of convexity.
- There are a range of products with varying depths of convexity integrated into the flange. It is important to select an appliance with the correct form of convexity; soft, light, or deep.

What pressure do convexity products place on the peristomal skin?

There is no evidence of published studies from product development which identify skin pressure parameters. What we do know is that light convexity of used with a belt may place the same or more pressure on the peristomal skin than deep convexity. It is considered that the size of the aperture in the convex flange, the softness of the abdomen and the use of a belt all influence pressure. Patients should be educated and advised of the potential problems associated with convexity usage and be told to contact their SCN if they experience pain around their stoma or notice purple discolouration of the skin.

Conclusion

Not all patients require a convex product but for those who do, a thorough assessment is required. For many, the addition of a seal or paste will be enough to ensure a secure and comfortable seal. Others may require pouches with an integral convexity and may also require a belt (although many patients appear to dislike wearing these). The guidance and decision making algorithms use best available evidence to suggest potential management strategies and is intended to support decision making but is not a rigid prescription for care. Each patient will require individual assessment and evaluation using the principles outlined in this guide.

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3 steps to stoma assessment:

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3. Select solution
Nursing assessment to inform and rationalise clinical decision making

A thorough nursing assessment is essential to consideration of convexity products. It is not uncommon for patients to have one of the clinical scenarios listed in Table 2, but to have healthy skin and to be leakage problem free. The clinical scenario where the stoma does not automatically make a convex product is required. Careful assessment and history taking should inform your management in conjunction with clinical observation. The patient’s abdomen should be assessed in the lying, sitting and standing position and note made of the consistency/viability of the peristomal skin and condition of the peristomal skin. To assist your assessment of the patient consider the following questions:

- Is the area around the stoma – regular, inward, outward?
- Is the stoma flush or opening near or at skin level, protruding or retracted?
- Is the abdomen soft or firm?
- Are there superficial or deep creases around the stoma?
- Is the stoma flush with the skin level, protruding or retracted?
- A standardized history and assessment tool is available for use on the enclosed pad

Products and accessories

There are a variety of options available to produce a degree of convexity. These are outlined in Table 1.

- A one piece, flat appliance, with a flexible and mouldable adhesive may be all that is required to provide convexity and prevent leakage in those with small creases (McKenzie 2001).
- A stoma pad can be used to create a level pouching area and then a flat appliance can be used for overdressing (Boarini et al. 2006).
- Rings can be used to fill dips or provide a degree of convexity around a stoma which has its opening near or at skin level. A belt can provide added support (Hampton and Bryant 1992) and provide security and prevent leakage in those with skin creases (Metcalf 2001).
- There are a range of products with varying depths of convexity integrated into the flange, it is important to select an appliance with the correct form of convexity, soft, light, or deep.

What pressure do convexity products place on the peristomal skin?

There is no evidence of published studies from product development which identify skin pressure parameters; what we do know is that light convexity of a well may place the same or more pressure on the peristomal skin than deep convexity. It is considered that the size of the aperture in the convex flange, the softness of the abdomen and the use of a belt all influence pressure. Patients should be educated and advised of the potential problems associated with convexity usage and be told to contact their SCN if they experience pain around their stoma or notice purple discoloration of the skin. Given that there are potential risks associated with the use of convexity, regular follow up by the SCN is recommended (Bhullara & Tirman 2001, Boyls et al. 2004, Cronin 2006).

Conclusion

Not all patients require a convex product but for those who do, a thorough assessment is required. For many, the addition of a seal or paste will be enough to ensure a secure and comfortable seal. Others may require pouches with an integral convexity and may also require a belt (although many patients appear to dislike wearing these). The guidance and decision making algorithms use best available evidence to suggest potential management strategies and is intended to support decision making but is not a rigid prescription for care. Each patient will require individual assessment and evaluation using the principles outlined in this guide.

References