The role of Eclypse Adherent Sacral® in managing sacral pressure ulcers

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For patients, the consequences of pressure ulcers represent a major burden of sickness and reduced quality of life (Clark et al, 2004). Pressure ulcer prevention has become very important for clinical practice, and the National Patient Safety Association (NPSA) has urged all NHS organizations across England and Wales to work towards a zero tolerance for pressure ulcers. Nevertheless, pressure ulcers still occur and new pressure ulcers are estimated to occur in 4–10% of patients admitted to acute hospitals in the UK. The sacrum is cited as the most common location for pressure ulcers, with one study demonstrating that, in the UK, the highest percentage of those in the study (37.5%) had a pressure ulcer on their sacrum (Clark et al, 2004).

A pressure ulcer is: 'A localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear' (European Pressure Ulcer Advisory Panel (EPUAP) and National Pressure Ulcer Advisory Panel (NPUAP), 2009). EPUAP/NPUAP also stated that: 'A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated'.

Pressure ulcers are graded using the EPUAP/NPUAP (2009) grading system from 1 to 4, where grade 1 is the most superficial damage with intact skin, and grade 4 is the most severe, with damage through to muscle and bone. According to the European Wound Management Association (EWMA) (2005), the majority of pressure ulcers grade 3 and 4 occur in elderly people who will also have impaired immune systems associated with advanced age, comorbidities and malnutrition.

Sacral pressure ulcers can cause a great deal of distress to patient through increased pain, loss of independence and poor self-esteem (Beldon, 2008). Beldon also explained that the management of pressure ulcers is difficult for clinicians, as it is likely there will be a high level of exudate.

Exudate

Exudate is the fluid produced from chronic and acute wounds, or fistulae (Thomas, 1997). It is the result of the normal inflammatory process of healing where the release of mediators involved in inflammation, e.g. histamine and bradykine, leads to the increase in the permeability of the capillary walls, allowing fluid to leak through the vessels into the tissue surrounding the wound. Excess fluid then enters the open wound, where it is referred to as exudate (Thomas 1997; World Union of Wound Healing Societies (WUWHS), 2007; Adderley, 2010).

Exudate is made up mainly of water, but also contains other products, including electrolytes, nutrients, inflammatory mediators, white cells, protein-digesting enzymes, growth factors and waste products (WUWHS 2007). Thomas (1997) explained that exudate plays an important part in the healing process, providing essential nutrients such as glucose and proteins, which provide an energy source to actively metabolize cells, as well as acting as a transport medium for white cells. The amount of exudate produced in normal healing is partly related to the size of the wound, with the assumption that the larger the wound, the greater the level of exudate. In the case of normal healing, it is expected that the level of exudate will decrease as the wound heals (WUWHS, 2007).

Winter (1962) demonstrated the importance of a moist wound healing environment, and although most evidence for moist wound healing was developed following evidence gained from experiments on acute wounds, this principle was soon transferred to the care of chronic wounds (Falanga, 2004). However current evidence suggests that

ABSTRACT

The cost to the NHS of treating pressure ulcers is estimated at £1.4–2.1 billion per annum (Bennet et al, 2004). This does not take into consideration the cost to the patient in terms of loss of dignity and pain. It is estimated that between 4–10% of admissions to acute hospitals have pressure ulcers. The most common location for pressure ulcers is the sacrum, and the management of sacral pressure ulcers can be problematic (Beldon, 2008). As a result of the location, the risk of infection from faecal matter is high. Wound infection can result in increased exudate production, and although exudate is an important factor in wound healing, excess exudate can be very problematic for both the nurses and their patients. The aim of this article is to discuss the benefit of Eclypse Adherent Sacral dressing in the management of excess exudate and dressing related pain associated with sacral pressure ulcers. As the majority of patients with pressure ulcers are elderly a suitable secondary dressing should be able to manage excess exudate be easy to apply and pain free on removal. Soft silicone technology is capable of meeting all theses challenges.

KEY WORDS

• Pressure ulcers • Policy • Wound care • Auditing

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acute and chronic wound exudate differs, with chronic wound exudate having a high level of protein-digesting enzymes (proteases) which can have an adverse effect on wound healing by slowing down and/or blocking cell proliferation and degrading growth factors, which in turn has a detrimental effect on normal wound healing (Cameron, 2004; Dowsett, 2008).

A grade 3 or 4 pressure ulcer on the sacrum is likely to contain dead tissue, which once debrided will result in a cavity. Exudate management can be a problem with these pressure ulcers during and after the ulcer has been debrided (Adderley, 2010). Managing exudate is often a difficult challenge for nurses and can also be problematic for the patient. The aim of exudate management is to achieve a moist wound bed that is neither too dry or too wet. If the wound becomes too dry, a scab will form, and healing and contraction is impeded. With excessive exudate, the wound bed becomes saturated, and there is leakage of fluid on to the surrounding skin which can be corrosive and lead to maceration, which is also painful for the patient. Dressings can also become saturated, leading to wet clothing and bedding which is both uncomfortable and distressing for the patient (Adderley, 2008; Dowsett, 2011).

Appropriate management begins with a holistic approach which will allow the clinician to identify and address patient and wound-related factors, e.g. the impact of the level of exudate on the patient's quality of life, and the type and amount of exudate (Adderley, 2008; Dowsett, 2011).

According to Dowsett (2011), dressings and topical negative therapy devices are the main option for the management of heavily exuding wounds. However, the cause of the excess exudate should be explored before an appropriate treatment is selected. For example, an increase in exudate level can be a result of infection, and therefore treatment should address the problem of wound infection and manage the exudate problem. Consequently, in some cases, an antimicrobial may be used to deal with the infection, with a suitable secondary dressing to manage the excess exudate. Adderley (2008) explained that the ideal dressings should be able to quickly absorb the exudate and hold that moisture within the dressing away from the surrounding skin and preventing maceration. This was supported by Stephen-Haynes (2011) who argued that absorbent dressings should be comfortable and conformable, suitable to be left in place for long duration while preventing leakage and protecting the periwound skin from exudate and excess moisture.

Honey

In recent years, antibiotics resistance has led to clinicians considering alternatives when treating wound infection, and topical antimicrobials have regained favour. Honey is a recognized antimicrobial, and has been used in wound care for millennia. Not only does honey treat the infection, but it also has the advantage of debriding a wound and assisting with the management of malodour (Van der Weyden, 2003). Adverse effects from the application of honey are rare; however, an assessment to eliminate any possibility should be made before its application (Cutting, 2008).

Honey dressings are available as a gel, tulle and an alginate impregnated dressing. However, they are used as a primary dressing and will require a secondary dressing. Currently, there are a range of honey dressings available, including a Manuka honey impregnated alginate called Algivon®. For evaluation, Algivon was used as a primary dressing with Eclypse Adherent Sacral®. Algivon is an absorbent, sterile and non-adherent alginate dressing impregnated with Activon Medical Grade Manuka honey.

Soft silicone dressings

According to Thomas (2003), soft silicones are a particular family of solid silicones, which are soft and tacky. These properties enable them to adhere to dry surfaces. Soft silicone dressings are coated with soft silicone as an adhesive or a wound contact layer. They are indicated where it is important to prevent trauma to the wound area and/or pain to the patient. Soft silicone has the advantage of being removed without causing trauma to the wound or to the surrounding skin.

Additionally, soft silicone dressings are recommended for fragile elderly skin where frequent dressing changes can cause skin damage and pain. Thomas (2003b) highlighted that a review of the literature identified pain and trauma at dressing removal to be a major concern to both patients and clinicians. Soft silicone technology has the advantage of providing a dressing that is hydrophobic and does not stick to a moist wound, but sticks to surrounding dry skin. In addition, soft silicone has the benefit of maintaining a moist environment and assisting with the management of excess exudate, but will not damage newly formed granulating tissue or epithelial cells.

Eclypse Adherent Sacral® dressing

Eclypse Adherent Sacral is a multi-layered sacral wound dressing composed of a contact layer of Silfix® soft silicone which adheres only to normal healthy intact skin, a super absorbent central layer for superior fluid management, and an outer layer of a breathable polyethylene protective backing. Eclypse Adherent Sacral has a high capacity and works by converting all fluid into a moist gel to reduce potential maceration and prevent strike-through.

Eclypse Adherent Sacral is suitable for all exuding wounds on the sacrum, but is contraindicated where arterial or heavy bleeding is present. Eclypse Adherent Sacral should be applied with the silicone face down, with a border overlap of at least 2 cm around the wound edge. It should be changed before it reaches capacity, and depending on the level of exudate, the dressing can remain in situ for up to 7 days.

Eclypse Adherent Sacral is suitable for use as a primary or secondary dressing, and will not lose its adhesion after initial application. Therefore, it can help to achieve an optimum dressing positioning without wastage.

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Table 1. Initial Assessment Eclypse Sacrum Adherent and Algivon

Patient number and gender	Pressure ulcer grade and location	Continence	Surrounding skin	Pain score at dressing change	Level of exudate	MUST Score
1-F	Grade 2 pressure ulcer/moisture lesion buttocks	Incontinent of urine	Macerated	5/10	H	2
2-M	Moisture lesion both buttocks	Incontinent of urine	Inflamed, macerated, blistered and fragile	5/10	M	1
3-F	Grade 4 sacrum	Incontinent of urine	Macerated, blistered and fragile	8/10	H	2
4-F	Grade 4 sacrum	Incontinent of urine and faeces	Inflamed, macerated, blistered and fragile	8/10	H	2
5-M	Grade 4 sacrum	Continent	Inflamed, macerated, and blistered	2/10	H	3
6-M	Grade 4 sacrum	Incontinent of urine and faeces	Inflamed, macerated, blistered and fragile	0/10	H	2
7-M	Grade 4 left hip	Continent	Inflamed and fragile	0/10	H	3
8-F	Grade 3 right buttocks	Continent	Inflamed and fragile	6/10	M	3
9-F	Grade 3 right hip	Continent	Inflamed and fragile	5/10	H	1

Evaluation of Eclypse Adherent Sacral dressings

Eclypse Adherent Sacral dressing was evaluated from 1 February–18 June on 10 patients; however, details were incomplete for 1 patient. *Table 1* provides information on the initial patient assessment, including continence status, condition of the surrounding skin, level of exudate, and pain score at dressing changes.

Eclypse Adherent Sacral performed well on exudate management, with dressings staying in situ for 2–4 days. There was also an improvement in the condition of the surrounding skin of all the patients that were initially reported with maceration and associated excoriation. Only 4 out of 9 patients were continent; however, the continent status of the patient did not appear to make any difference to the wear time of the dressing (*Table 1*).

Patients found the dressings to be comfortable, and reported a reduction in pain at both dressing changes, as well as continuous pain (*Table 2*). The nurses found Eclypse Adherent Sacral easy to apply and remove, and found that dressing changes were reduced to every 3–4 days.

Although it is recommended that the dressing is not cut, nurses did cut the border of the dressing in 3 cases to fit differing patient profiles. This made no difference to the wear time of the dressing. The patients' pain score at dressing changes was reduced in all 9 cases, with only 2 patients reporting any pain at dressing changes. *Table 2* lists the evaluation outcomes.

Eclypse Adherent Sacral as a secondary dressing

Algivon was used as a primary dressing to lightly pack the sacral pressure ulcers in 2 of the evaluations where ulcers showed signs of infection. Both ulcers were grade 4, with the largest being 20 cm x 30 cm and 15.5 cm in depth. Owing to the high level of exudate, Eclypse Adherent Sacral was used as the secondary dressing.

In the first case, before, the largest pressure ulcer was previously dressed with surgical pads and held in place with hyperfix tape. Dressings were changed 4 times a day, and the patient initially reported a pain score at dressing changes as 10, with a continuous pain score of 8. However, with the new dressing regimen, the dressing was changed every 2-3 days, and the signs of spreading infection started to resolve after 4 days. Pain initially reduced to 9, with a continuous pain score of 6, and within a further week, the pain had reduced to 5 at dressing change with a continuous pain score of 3.

The patient said that Eclypse Adherent Sacral was 'gentle on my skin', 'kept my wound clean and dry' and 'did not need changing every day'. The clinician said it was 'easy to remove and apply', 'stayed in place for 48 hours' and 'caused no maceration'.

In the second case, before the new regimen, the ulcer was dressed with a silver hydrofibre dressing and covered with an adhesive foam dressing. The frequency of dressing changes was not documented. The patient reported that the pain at dressing change was initially 8, with continuous pain reported at 6. This reduced to 5, then 2 within a week, and then reduced to 1 and 0. The patient commented that Eclypse Adherent Sacral was 'soft' and caused 'no pain when it was being removed'. Clinicians reported that Eclypse Adherent Sacral was 'comfortable to apply', 'remained in situ for 48 hours', is 'easy to remove' and 'leaves no marking'. It is interesting to note that pain was initially reported to be higher in patients with infected wounds compared with the other 7 patients in the evaluation.

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Table 2 – Evaluation outcome

Patient Number	Pain Score at dressing change	Surrounding Skin	Dressing adherence	Nurses comments	Patient comments
1	0/10	Fragile	3–4 days	Non-adherence to macerated areas, easy to cut to fit, adhered to pressure ulcer region	Not as sore to take off compared to previous dressing
2	0/10	Fragile	3–4 days	Remained in place for 3–4 days, washable	Pain free
3	3/10	Fragile	2–3 days	Easy to apply and remove, stayed in place for 48 hours, no maceration	Gentle on my skin, kept my wound clean and dry, didn't need changing every day
4	1/10	Fragile	3–4 days	Comfortable to apply, remains in site 48 hours, wipes clean, easy to remove and leaves no marking	Soft, no pain when removed. Did not feel it was there
5	0/10	Fragile	3–4 days	Simple to apply, absorbent, less changes	Didn't hurt when time came to take it off
6	0/10	Fragile	3–4 days	Long lasting, easy to apply. Had to cut a split in the bottom section to seal over sacrum cleft	Comfortable, less changes/ disruption
7	0/10	Fragile	3–4 days	Fit to hip shape ok! Stayed in place 3 days	Easy to remove, didn't know it was there, colour like skin
8	0/10	Fragile	3–4 days	Sticky so didn't fall off, had to cut base to fit shape of buttocks	Padded, comfy
9	0/10	Fragile	3–4 days	Nice shape, had to cut base. Can wipe over it and it stays on	Soft, didn't hurt when the nurse removed it

Conclusion

The cost to the NHS of treating pressure ulcers is estimated to be £1.4–2.1 billion per annum. Excessive exudate can cause leakage and soling of clothing and bedding which can lower self-esteem. Pain at dressing changes is distressing and can reduce the patient's quality of life. However, Eclypse Adherent Sacral, used appropriately, can manage excess exudate and reduce pain at dressing changes and continuously. It is suitable to be used as both a primary and as secondary dressing with, for example, a honey dressing such as Algivon. Overall, the evaluation showed that the combination of Algivon and Eclypse Adherent Sacral worked well to reduce signs of infection, manage exudate, and reduce dressing changes, while being comfortable for the patient. **BJCN**

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KEY POINTS

- Sacral pressure ulcers are the most common type of pressure ulceration.
- The majority of patients with pressure ulcers are elderly with fragile skin
- Holistic assessment of the patient is necessary to select the most appropriate dressing
- Soft silicone technology can reduce pain at dressing changes
- Eclypse Adherent sacrum dressing is capable of managing exudate while reducing pain at dressing change