

Is Kliniderm foam silicone a suitable, cost-saving alternative to other silicone foam dressings?

KEY WORDS

- ▶ Silicone foam
- ▶ Kliniderm foam silicone
- ▶ Cost effectiveness

This product evaluation was undertaken to explore patients' satisfaction after changing from one silicone foam dressing to Kliniderm silicone foam. The evaluation involved 22 patients with a variety of wounds being cared for at a large primary care organisation. The data was collected over eight dressing changes and the author looked at the dressing's performance in terms of symptom management, exudate control and comfort. Clinician and patient satisfaction were examined as well as the potential for any financial savings that could be made by making a switch to Kliniderm foam silicone in one CCG's formulary.

In 2014, prescriptions of silicone foam dressings in England cost the NHS £28.7 million — 20.15% of the total prescription spend on wound care in that year (Health and Social Care Information Centre, 2015). In Sheffield CCG alone the amount spent on three types of silicone foam dressings size 10x10cm was just over £100,000 for 11 months in 2014–15 (data supplied from Sheffield Medicine Management). This figure does not reflect the amount spent on other sizes or silicone dressings with added antimicrobials. As the NHS seeks to improve outcomes and reduce costs it has become incumbent on nurses to try to prescribe dressings that are the most cost effective. Dressings need to be chosen which will improve or maintain the clinical outcome while also reducing costs.

With this in mind a decision was made to evaluate the impact of a change in dressing product before the local formulary review at Sheffield CCG. Nine district nursing teams were asked to select patients with wounds who were being treated with a silicone dressing other than Kliniderm foam silicone (Aria Medical). Kliniderm silicone was then used for up to eight dressing changes as an alternative product and then patient and clinician satisfaction were surveyed. The author then considered the financial impact of the change.

BACKGROUND

Foam dressings are generally made from polyurethane that has been heat treated to provide a smooth contact surface. They provide thermal insulation, do not shed fibres or particles and are gas permeable. The foam surface is hydrophilic which means it attracts moisture (Pudner, 2001). Foams use vertical wicking which absorbs the exudate upwards into the dressing avoiding maceration to the surrounding skin (Benbow, 2008). The mode of action varies but the majority of foam dressings available are designed to 'absorb and lock away' the exudate thus providing high absorbency and wear time (Cook and Barker, 2012).

Over the past 10 years, foam dressings have been adapted to have a soft silicone contact layer. Soft silicones are a particular family of solid silicones which are soft and tacky. Soft silicone foams were developed to minimise the problems of pain and trauma at dressing change and to protect the peri-wound skin (Lawton and Langeon, 2009). Majan (2006) showed that when removed from the skin, soft silicone dressings do not cause trauma to the wound or peri-wound skin. Soft silicones conform and adhere well to dry surfaces, they have low toxicity making adverse reactions rare and they cannot be absorbed into the body (Thomas, 2003).

It is well recognised that wound healing progresses most rapidly in an environment that is

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clean and moist but not wet (Brett, 2006). Excessive exudate can be challenging to manage in terms of clinical time and cost accrued in repeatedly changing soiled dressings and when addressing the impact the wound exudate has on the patient's quality of life. Effective exudate management must aim to treat the underlying cause, enhance quality of life, optimise the wound bed, remove moisture, and prevent exudate-related problems such as peri-wound changes, odour and pain (World Union World Health Societies, 2007).

Dressings facilitate wound healing by providing the optimal environment for healing (Vuolo, 2009). An optimal environment for healing requires a dressing which provides: a moist environment; thermal insulation; is non-adherent; requires infrequent dressing changes; is safe to use; provides mechanical protection; is comfortable and conforms; has good absorption; is impermeable to micro-organisms; acceptable to the patient; is cost effective and sterile (Morgan, 1999). Inappropriate dressing selection can lead to delayed healing, increased pain, increased infection and higher costs as well as having a detrimental impact on the patient's quality of life (Ousey and Cook, 2011),

Silicone foams can be used on a variety of wounds including pressure ulcers, leg ulcers and traumatic wounds. While other dressings are available to manage such wounds, Matsumura et al (2012) found in a comparative study that dressings with silicone adhesive removed less stratum corneum from the wound when compared with hydrocolloid and polyurethane foam using an adhesive. Timmons et al (2009) found the use of silicone dressings improved patients' quality of life by reducing pain on removal, reducing anxiety and ultimately speeding up the healing process.

METHOD

The six-week evaluation took place at the Sheffield Community Care Group (CCG). Ethical approval was not required as this was an evaluation of a product that is already available on prescription but patient consent was obtained regarding the change in regimen. Approval was gained from the Tissue Viability Network via the Sheffield Wound Group. Nine district nursing bases were selected from the four localities in Sheffield. Eight dressing changes for each patient were considered

enough to assess patient and nursing satisfaction. The evaluation did not assess wound healing but the dressing's ability to manage symptoms. Patients who were already receiving treatment for wound management with products on the trust's formulary were recruited. Twenty-two evaluations for 22 patients were collected over the period allocated. The evaluation took place as part of a formulary review and also considered cost-effective alternatives to the current dressings in view of rising prescription costs issued by the medicine management department.

Verbal explanation of the rationale for the evaluation was provided to all participants and consent was received and documented. Other members of the nursing team were also informed and educated about the purpose of the evaluation. The following aspects of the patient evaluation were recorded:

- » Patient age and gender
- » Current regimen
- » Type of wound
- » Aim of management
- » Wound duration
- » Exudate level
- » Patient comfort on application and removal
- » Exudate management and conformability
- » Clinician feedback
- » Size of dressing used.

Comfort and exudate management were assessed using a five-point scale where 1 was very poor and 5 was excellent.

RESULTS

All 22 patients were seen in a primary care setting for management of a variety of wounds (*Figure 1*). The ratio was 15 men to seven women and the average age was 71 with the age range being 38–88 years old. Of the 22 evaluations received, 16 stated the type of wound the silicone foam dressing was used for, three were used for mixed reasons and three did not state the wound. Foam dressings are suitable for the management of pressure ulcers, surgical wounds and traumatic wounds and so Kliniderm was considered suitable for all the 22 patients. *Figure 2* demonstrates the dressing of choice before the evaluation. All but one patient were receiving treatment with either a foam dressing or a silicone foam before the product evaluation.

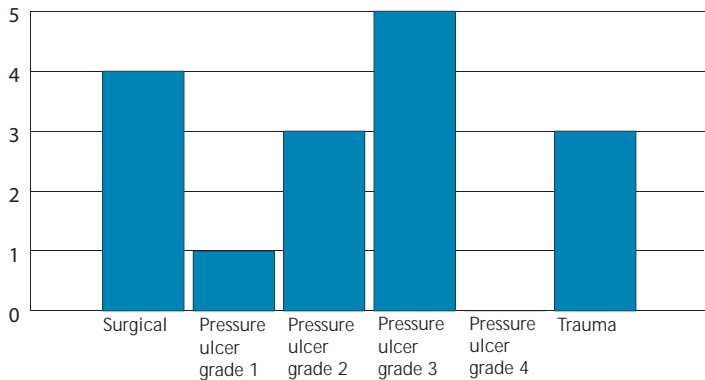


Figure 1. Participants' wound type.

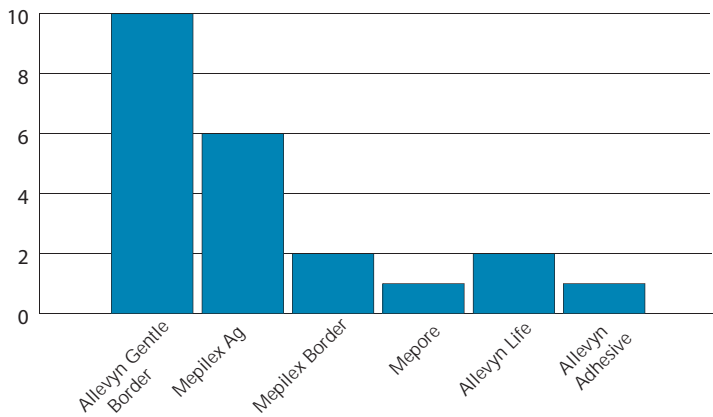


Figure 2. Dressing used before the evaluation.

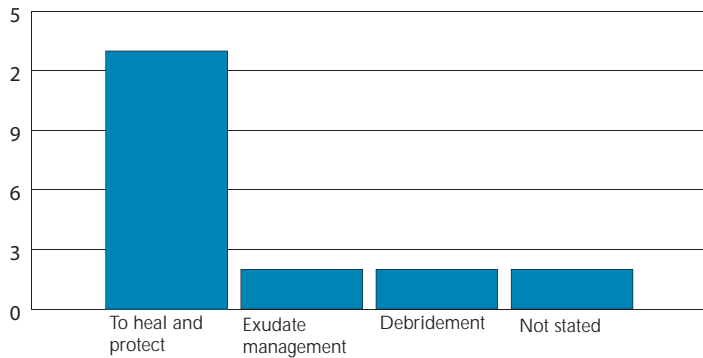


Figure 3. Clinicians' treatment aims.

Figure 3 shows the clinicians' aim when selecting the dressing. The treatment aims for 15 of the 22 evaluations was to heal and protect the wound while only two stated wound exudate management as the desired outcome of using the wound dressing. Figure 4 shows wound duration. Six of the 22 wounds were acute wounds, a further five had been present between five and 12 weeks, 11 wounds were chronic with 10 of these wounds having been present for 24 weeks or more.

The exudate levels were taken as an average of each of the 22 patients' exudate ratings over the course of the evaluation length of up to eight dressing changes (Figure 5). Foam dressings are appropriate for light to moderate exudate levels. Sixteen of the 22 patients had light moderately exuding wounds. These levels were determined by the clinician. Local guidelines for this were followed which are based on the national descriptions of dry, moist, wet, saturated and leaking (EWMA, 2007). Consideration was also given to the amount of exudate retained in the dressing, the number of dressing changes required in 48 hours and a visual inspection of the wound.

Figure 6 shows comfort upon application and removal and exudate management. This was taken as an average of all 22 scores. The options were 1 (very poor), 2 (poor), 3 (average), 4 (good) and 5 (excellent). All averaged 4 or above for Kliniderm when compared with the dressing previously used.

DISCUSSION

From the scoring system for comfort, ease of application, removal and exudate management, all participants scored four or above when comparing Kliniderm to the previous regimen. This indicates overall satisfaction with the regimen change.

Eighteen of the 22 community nurses' evaluations indicated that Kliniderm's performance was equal to the previous product used while only two stated that the performance was worse, one did not reply and one stated that the performance was better. Eighteen of the 22 evaluations suggested recommending the product for the local formulary when asked yes or no.

When asked about Kliniderm, 20 patients were happy with the product while only two were not due to reported poor absorption. The majority [n=21] of patients declared the product to be very comfortable.

Kliniderm foam silicone has been shown in this small evaluation to be an acceptable alternative to other silicone dressings in terms of patient comfort and clinicians' satisfaction and so the cost of a switch to Kliniderm was calculated.

In Sheffield CCG the cost of 10x10 silicone dressings was £100,157.05 in an 11-month period in 2014–2015. This has been calculated as 38,988 Alleyn Gentle Border and 5,574 Mepilex Border

giving an overall approximation of 44,562 10x10 silicone dressings prescribed in 11 months. The cost of the same number of Kliniderm dressings would have been £72,636 giving a potential saving of £27,521 alone. This is based on the premise that a switch to Kliniderm would necessitate an equivalent number of dressing changes. The wear time of the different dressing types has not been covered in the evaluation and further investigation should be made to test this conclusion.

There are limitations to this small evaluation. A study that compared the number of dressings used until the wound healed using different silicone dressings and the subsequent dressing costs accrued would more accurately indicate the extent of the savings that could be made by switching to Kliniderm. This evaluation shows that Kliniderm — a cheaper dressing than those currently on the formulary — can manage symptoms and is considered a satisfactory alternative to other silicone dressings by clinicians and patients.

CONCLUSION

Nurses are expected to give high quality evidence-based care while also considering cost saving. This small evaluation may suggest that Kliniderm could be a cost effective addition to CCGs' formularies although further investigations should be made. **WUK**

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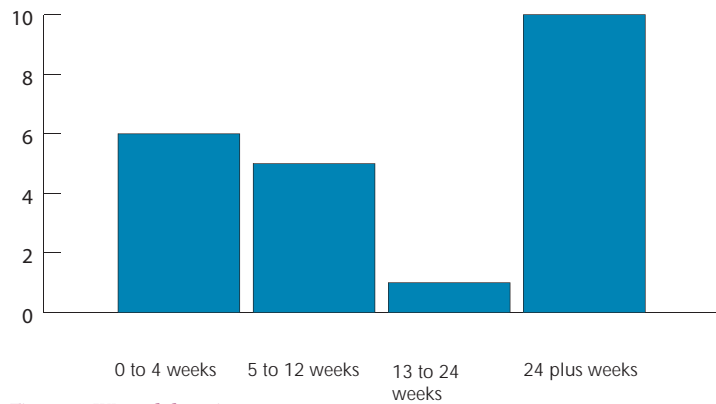


Figure 4. Wound duration.

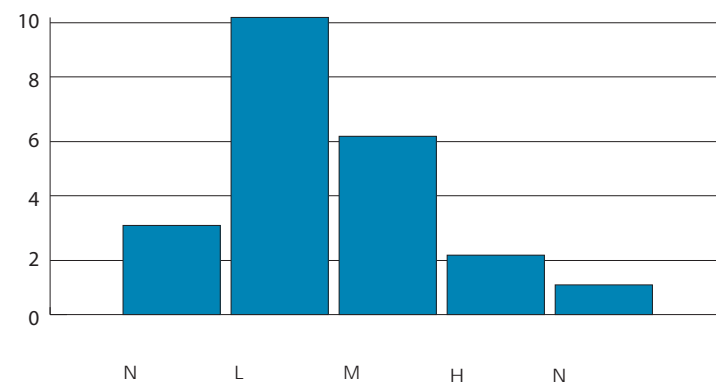


Figure 5. Exudate levels.

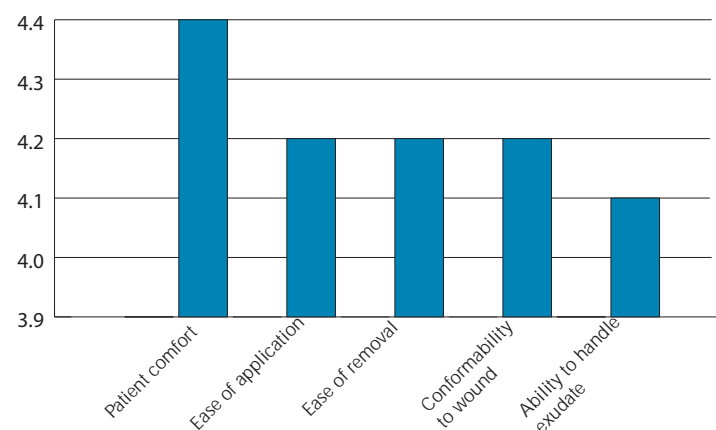


Figure 6. Comfort, ease of application and removal, conformability and ability to manage exudate as rated on a 1–5 scale.

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