Developing a structured process for evaluating burn dressings

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The treatment of burn wounds is complex and the correct dressing selection can have a huge impact on the time taken for the wound to heal. With correct management, dressings can speed up the healing process and prevent the formation of problematic scars. In addition, the specific aim of hand burn management include: prevention of deeper structures and early functional rehabilitation (Robson et al 1992). However, these aims are often difficult to achieve as pain is known to be very debilitating in patients with burns and frequent dressing changes can pose a painful problem. Soft silicone technology has been developed to reduce the problems of pain at dressing changes. A prospective evaluation of two soft silicone products was carried out. The aim of this poster is to present a retrospective analysis of these two evaluations.

Method

For some time now the team at UHSM have been evaluating dressing products to see if they are `fit for purpose` in terms of managing burn wounds. This process is now very structured and allows us to retrospectively compare similar products given that they have been evaluated on similar wound types. The evaluation form (see Fig 3) is used for all types of dressing and scores are taken using a 10 Point Likert Scale to record scores for comparison. The areas assessed include, pain on application, ease of application, conformability, pain on removal, pain in-situ, ease of removal and control of exudate, with 0 being poor and 10 being excellent. Pain scores were measured, with 0 being minimal pain and 10 being extreme pain. Each patient had an average of 3 dressing changes, although they may have more, however a mean is taken over the dressing changes to account for fluctuations. This allows us to restrospectively compare products and where there is little or no difference in efficacy can inform decisions about product choice in terms of cost.

An example of how this works in practice is the retrospective comparison against two silicone products on hand burns. Silflex non-adherent dressing is a polyester mesh which is impregnated with silicone. It is designed to adhere to the skin surrounding the wound but not to the wound bed itself. The silicone contained within Silflex is hydrophobic and does not stick to a moist wound, only to surrounding dry skin. Mepitel One incorporates all the benefits of Mepitel, however, it has the added bonus of only having Safetac technology on the wound contact side, allowing easy handling and application. Safetac technology prevents the dressing from adhering to the moist wound bed. Both dressings were evaluated at different time points on 10 patients. Table One demonstrates the Depth and TBSA of the 20 patients.

Topical antimicrobials were used together with a secondary dressing of gauze swabs. Wounds were measured and photographed on each dressing change. Overall comments were made by patients and nursing staff.

	Number of patients	Burn depth	TBSA
Silflex	1	Full Thickness	0.75%
	2	Deep Partial Thickness	0.1-0.2%
	2	Superfical Partial Thickness	0.4-1%
	5	Superficial	0.1-2%
Mepitel One	6	Deep Partial Thickness	0.25-1%
	2	Superficial Partial Thickness	0.5%
	2	Superficial	0.1-0.5%

Table 1

	Number of dressings	Age range	Mean age
Silflex	34	18 – 53 years	43.5 years
Mepitel One	43	18 – 80 years	34.7 years

Table 2

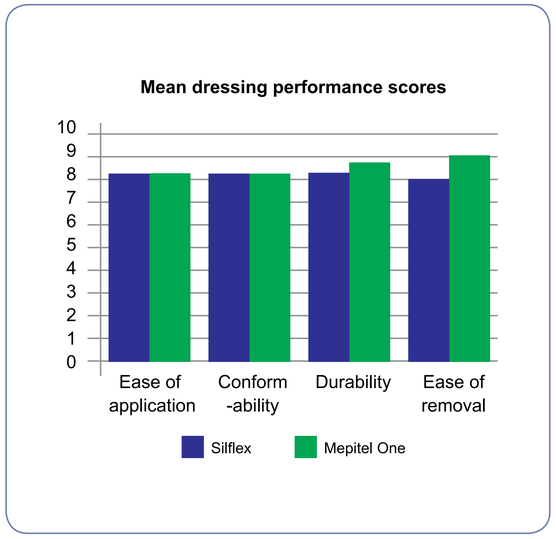
Results

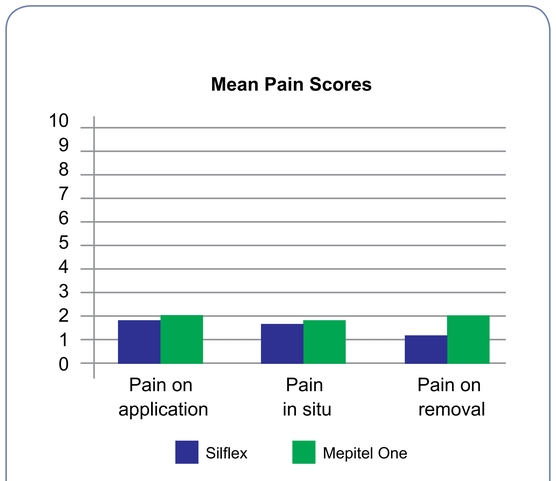
Both dressings performed well in relation to pain and ease of application and removal. However, Silflex scored slightly better in terms of pain on application and removal, whilst Mepitel One scored slightly better in terms of ease of removal.

Figure 1 - Mepitel One in situ

Figure 2 - Silflex in situ

Additional comments from staff included, that they were happy with both products and would recommend them for future use. However, it was noted that Silflex was not quite as malleable in terms of applying the dressing but Mepitel One was harder to remove from the backing if cut to size.





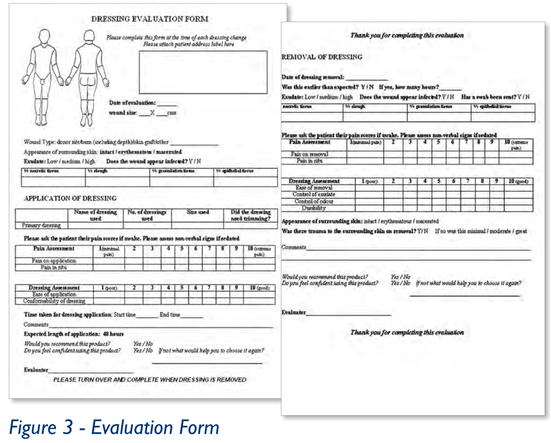


Figure 3 - Evaluation Form

Conclusion

Pain during dressing changes has been shown to have detrimental affects on patients which then impacts on quality of life. A study by Timmons et al (2009) found that the use of silicone dressings improved patients quality of life by reducing pain on removal, reducing anxiety and ultimately, speeding up the healing process. However, these dressings do come at a considerable cost and this is always a concern particularly when using them over large burned areas. Given that there was no significant difference in terms of patient or staff feedback, it was determined that the Service would opt for Silflex which realised a saving of £7,000 per annum. Thus allowing the service to continue to use products that reduce pain and anxiety of dressing changes.

Many products are suggested as "Burn Dressings", however often these products do not have any clinical evidence of their use in Burn wounds. The development of a robust clinical evaluation process that has been agreed with the Research & Development Department has allowed the service to formalise evaluations of all products that might be considered for use in the service. We can therefore retrospectively compare evaluations to ensure that we are consistently utilising the most clinical and cost effective treatment for out patients, something that is essential during the current financial climate.

References

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